STEP BY STEP GUIDELINE
FOR
EMISSION CALCULATION, RECORD KEEPING
AND REPORTING
FOR
AIRBORNE CONTAMINANT DISCHARGE

ONTARIO MINISTRY OF THE ENVIRONMENT

April, 2001

Ontario

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Glossary

"by-product" is a substance listed in Table 2A, 2B or 2C in the Guideline, that is incidentally manufactured, processed or otherwise used at the facility and is released on-site to the environment or transferred off-site for disposal.

"CAS number" stands for Chemical Abstracts Service Registry number assigned to the contaminant, referenced in the Guideline. The CAS information is the property of the American Chemical Society and any use or redistribution, except as required in supporting regulatory requirements and/or for reports to the government when the information and the reports are required by law or administrative policy, is not permitted without the prior, written permission of the American Chemical Society.

"criteria air contaminants" (CACs) are: oxides of nitrogen (NO_X), sulphur dioxide (SO_2), volatile organic compounds (VOCs), carbon monoxide (CO), and particulate matter (PM) including PM_{10} (particulate matter with a diameter less than or equal to 10 micrometers) and $PM_{2.5}$ (particulate matter with a diameter less than or equal to 2.5 micrometers).

"coating material" includes paints, lacquers, enamels, varnishes, urethanes, polishes, sealers, vinyls and other materials that are used in surface coating operations for decorative or protective purposes, but does not include printing ink.

"Director" is the Director of the Environmental Monitoring and Reporting Branch, Ontario Ministry of the Environment, 125 Resources Road, Toronto, Ontario, M9P 3V6.

"discharge" when used as a verb, means add, deposit, leak or emit to the atmosphere, and when used as a noun, means addition, deposition, emission or leak to the atmosphere.

"discharge unit" means a device, or a group of devices that operate together in such a manner that one device cannot function independently of the other devices in the unit, and that discharges or has the potential to discharge a contaminant into the air.

"emissions" include stack or point emissions to air, fugitive emissions to air, storage or handling emissions to air, emissions to air from spills, and other non-point emissions to air.

"emissions monitoring system" includes a suite of options: continuous emission monitoring system or other methods including, but not limited to, the methods described in the Guideline. Other methods include, but are not limited to, predictive emission monitoring system, mass balance, emission factors, emission estimation model and engineering calculations which provide accuracy typically obtained through source testing conducted in accordance with the Ontario Source Testing Code, or better.

"facility" includes all buildings, equipment, structures and stationary items, such as surfaces and storage piles, that,

(a) are located on a single site, or
(b) are located on two or more contiguous or adjacent sites that are owned or operated by the same person and function as a single integrated site.

"fugitive emissions" are the total of all emissions to air that are not emitted through confined process streams. These emissions include: fugitive equipment leaks from valves, pump seals, flanges, compressors, sampling connections, open-ended lines, etc.; evaporative losses from surface impoundments and spills; emissions from building ventilation systems; and any other fugitive or non-point air emissions from land treatment, mine tailings, storage piles, road dust, etc.

"generation facility" means a facility that is a generation facility as defined in subsection 2 (1) of the Electricity Act, 1998 but does not include a generation facility that has a generating capacity of 1 megawatt or less or that sells 10 per cent or less of its total electricity generated to the IMO-administered markets as defined in that subsection.

"generation unit" means a unit that is used to generate electricity.

"Guideline" means the Ministry of the Environment publication entitled "Step by Step Guideline for Emission Calculation, Record Keeping and Reporting for Airborne Contaminant Discharge" and dated April 2001, as amended from time to time.

"hours of labour" is the total number of hours worked, including paid vacation and sick leave. Owners, students, part-time and contract employees are included in this calculation. This calculation depends specifically on the number of hours worked by all employees at the facility during the calendar year and not on the number of persons working. 10 "full-time employees" is equivalent to 20,000 hours worked.

"Independent Market Operator (IMO) - administered markets" means the markets established by the market rules made under Section 32 of the *Electricity Act, 1998*.

"manufacture" means to produce, prepare or compound a substance (in Table 2B or 2C). It also includes the incidental production of a substance as a *by-product* resulting from the manufacture, processing or other use of other substances. The production of chlorine dioxide by a chemical plant is an example of manufacturing. The production of hydrochloric acid during the manufacture of chlorofluorocarbons is an example of incidental production.

"MPO" means manufacture, process or otherwise use.

"name plate capacity" means,

(a) with respect to a discharge unit, the total designed energy input capacity of the discharge unit, including but not limited to the energy input from fuel, steam, electricity, heat of chemical reactions and process materials, and

(b) with respect to a facility, the total of the name plate capacities of all the discharge units in the facility.

"other non-point emissions" are any other non-point air emissions not estimated in one of the emission types listed under the term "emissions".

"other use" and "otherwise used" encompass any use of a substance at a facility that does not fall under the definitions of "manufacture" or "process". This includes the use of the substance as a chemical processing aid, manufacturing aid or some other ancillary use. The use of trichloroethylene in the maintenance of equipment used for manufacturing and processing is considered an "other use". "Other use" does not include routine janitorial or facility grounds maintenance.

"oxides of nitrogen " includes nitric oxide and nitrogen dioxide, but does not include nitrous oxide.

"portable facility" means a facility that can be entirely relocated for operation, including portable polychlorinated biphenyls (PCB) destruction equipment, or an asphalt or concrete plant.

"process" means the preparation of a substance (in Tables 2B or 2C), after its manufacture, for distribution in commerce. Processing includes preparation of a substance with or without changes in physical state or chemical form. The term also applies to the processing of a mixture or formulation that contains a substance as one component, as well as the processing of "articles". The use of chlorine to manufacture hypochloric acid is an example of the processing of chlorine. The use of toluene and xylenes to blend paint solvent mixtures is an example of processing without changes in chemical form.

"printing ink" is ink that is used in the printing processes (web offset lithography, web letterpress, rotogravure, flexography and screen printing, etc.). Printing is a coating operation which results in an image or design on the substrate. Printing inks generally consist of 3 major components: pigments, binders and solvents. The binder and solvent make up the "vehicle" part of the ink and the solvent will evaporate from the ink into the atmosphere during the drying process.

"quarter" means a period of three consecutive months that begins on January 1, April 1, July 1 or October 1 of any year.

"smog period" means the period from May 1 to September 30.

"solvent" means any volatile organic compound that is used as a diluent, thinner, dissolver, viscosity reducer, cleaning agent or for a similar purpose.

"spills" are any accidental emissions to air that do not qualify as point or non-point air emissions.

"stack or point emissions" are total air emissions from stack or point sources including stacks, vents, ducts, pipes or other confined process streams. Emissions to air from pollution-control equipment generally fall into this category.

"storage or handling emissions" are the quantity of emissions to air from storage or the handling of a contaminant listed in Table 2A, 2B or 2C.

Step by Step Guideline

1 INTRODUCTION

This document is intended to assist members of the regulated community in determining how to satisfy the requirements of Ontario Regulation (O.Reg. 127/01) entitled "Airborne Contaminant Discharge - Monitoring and Reporting", which became law on May 1, 2001 pursuant to the Environmental Protection Act (EPA). Step by step procedures for calculating emissions, record keeping and reporting of annual, smog season, and quarterly emissions are also presented in this document.

In this Guideline, the terms "emission" and "discharge to air" will be used interchangeably with "airborne contaminant discharge".

Also, all references to "the regulation" mean O.Reg. 127/01.

O.Reg. 127/01 covers 358 air contaminants. The list was developed by a group of technical experts, comprised of ministry staff from the Environmental Sciences and Standards Division, the Operations Division and the Integrated Environmental Planning Division. Contaminants were included based on various domestic, transboundary and international environmental programs, including the MOE Air Standards/Guidelines, the Air Standards Plan, the Great Lakes Commission (GLC) Regional Air Toxic Emissions Program, the Canada-Ontario Agreement (COA) Tier I and II, Electricity Sector Reporting, the Anti-Smog Action Plan, the Acid Rain Program, the Inhalable Particulate/Respirable Particulate (IP/RP) Program, the Climate Change Program and the Air Toxics Program, as well as Environment Canada's National Pollutant Release Inventory (NPRI).

The contaminants have been divided into three lists, which appear as Tables 2A, 2B and 2C to this Guideline.

Table 2A lists 11 contaminants comprised of criteria air contaminants and greenhouse gases, which have release based reporting thresholds (see Section 2.2).

Table 2B lists 79 contaminants with graded MOE manufactured, processed or otherwise used (MPO) reporting thresholds (see Section 2.3).

Table 2C lists 268 contaminants which are common to the NPRI list for the reporting year 2000 and have the same reporting criteria as NPRI (see Section 2.4).

The list of 358 contaminants includes both individual contaminants (e.g., toluene) as well as contaminant groups/compounds (e.g., VOC). The public should exercise caution in aggregating contaminant emissions. For example, toluene should not be summed with total VOC since the total VOC value should already include toluene. Similar caution should apply to other contaminant groups/compounds such as xylene, mineral spirits, glycol ethers, dioxins and furans.

The regulation requires the calculation and reporting of air emissions if specific criteria are met by the various facilities set out in Table 1 of this Guideline. Those criteria are set out in the regulation, and discussed in Section 2 of this Guideline.

Facility owners and operators are required to ensure that certain reports are submitted under the regulation, and that those reports are accessible, without charge, to the public. That obligation can be met by making the report available at the facility's business premises, or electronically through the internet, and requires that reports be retained and accessible for at least seven years after the day the report is required to be submitted.

Owners and operators need to communicate with each other to ensure the requirements are met.

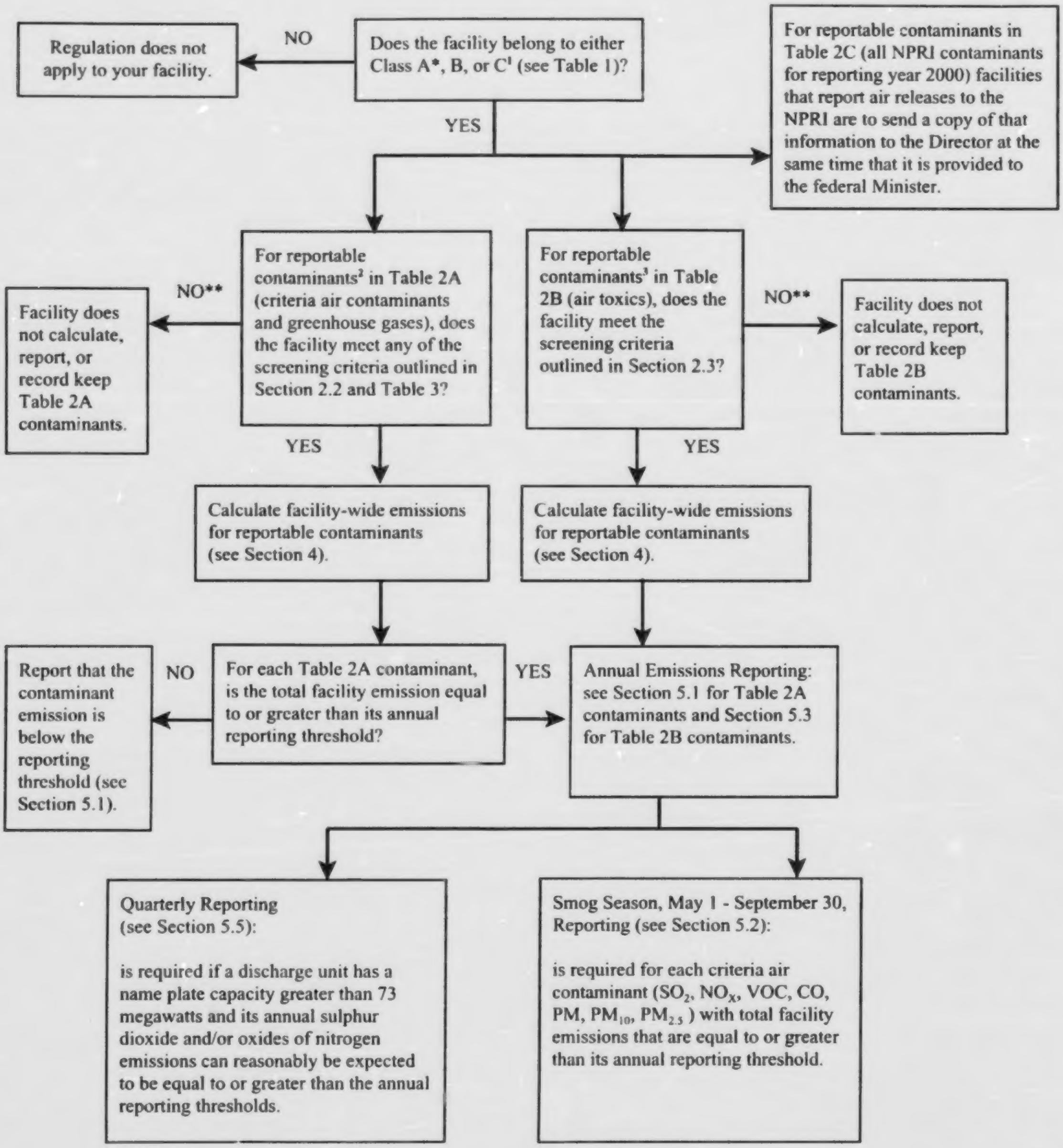
Annual reporting is required for contaminants in Tables 2A, 2B, and 2C if the respective reporting criteria are met (see Sections 5.1, 5.3 and 5.4 for assistance on determining what contaminants are reportable). For criteria air contaminants, smog season reporting is required in addition to annual reporting (see Section 5.2). NO_X and SO_2 are contaminants of particular significance to domestic and transboundary problems such as smog and acid rain. There are additional reporting criteria outlined in Section 5.5 of the Guideline for NO_X and SO_2 which call for facilities that meet the reporting criteria to report quarterly NO_X and/or SO_2 emissions using an emission monitoring system.

Persons reporting under this regulation are expected to use due diligence to comply with the requirements of the regulation. For the purpose of reporting under this regulation, it is intended that for any given contaminant with emissions that are equal to or greater than the reporting threshold, at least 95 percent of the total facility emissions are accounted for.

The contents of this Guideline and the associated tables may change from time to time due to MOE review. When this happens, notice of amendment will be published in *The Ontario Gazette*, or in the registry under the *Environmental Bill of Rights*.

Figure 1 of this document provides a quick reference of the reporting requirements under the regulation.

FIGURE 1: QUICK REFERENCE FOR REPORTING


Does the facility belong to either Class A*, B, or C[1] (see Table 1)?
NO
Regulation does not apply to your facility.
YES
For reportable contaminants in Table 2C (all NPRI contaminants for reporting year 2000) facilities that report air releases to the NPRI are to send a copy of that information to the Director at the same time that it is provided to the federal Minister.
For reportable contaminants[2] in Table 2A (criteria air contaminants and greenhouse gases), does the facility meet any of the screening criteria outlined in Section 2.2 and Table 3?
NO**
Facility does not calculate, report, or record keep Table 2A contaminants.
For reportable contaminants[3] in Table 2B (air toxics), does the facility meet the screening criteria outlined in Section 2.3?
NO**
Facility does not calculate, report, or record keep Table 2B contaminants.
YES
Calculate facility-wide emissions for reportable contaminants (see Section 4).
YES
Calculate facility-wide emissions for reportable contaminants (see Section 4).
For each Table 2A contaminant, is the total facility emission equal to or greater than its annual reporting threshold?
NO
Report that the contaminant emission is below the reporting threshold (see Section 5.1).
YES
Annual Emissions Reporting: see Section 5.1 for Table 2A contaminants and Section 5.3 for Table 2B contaminants.
Quarterly Reporting (see Section 5.5): is required if a discharge unit has a name plate capacity greater than 73 megawatts and its annual sulphur dioxide and/or oxides of nitrogen emissions can reasonably be expected to be equal to or greater than the annual reporting thresholds.
Smog Season, May 1 - September 30, Reporting (see Section 5.2): is required for each criteria air contaminant (SO_2, NO_X, VOC, CO, PM, PM_{10}, $PM_{2.5}$) with total facility emissions that are equal to or greater than its annual reporting threshold.

[1] If the facility belongs to Class C, the gathering of emission data will begin on January 1st 2002.

[2] Consult process and sector specific substance lists (Appendices B, C, and D) to determine reportable contaminants common to Table 2A.

[3] Consult process and sector specific substance lists (Appendices B, C, and D) to determine reportable contaminants common to Table 2B.

* For Class A, this regulation does not apply to a generation facility that has a generating capacity of 1 megawatt or less or that sells 10 percent or less of its total electricity generated to the IMO-administered markets.

** For Class A, generation facilities that do not meet the criteria outlined here must still report the parameters listed in Section 1 and 1.1 of Table 5.

2 REPORTING CRITERIA

The"Airborne Contaminant Discharge - Monitoring and Reporting" regulation will come into effect on May 1, 2001. Its application to the various facilities covered is phased-in.

2.1 Phasing of Application

Phase I will begin on May 1, 2001 and requires that facilities described in Classes A and B (Table 1) monitor and report in accordance with the regulation.

Phase II will begin on January 1, 2002 and requires that facilities described in Classes A, B and C (Table 1) monitor and report in accordance with the regulation.

This regulation does not apply to evaporative emissions from a vehicle as defined in the *Highway Traffic Act* or contaminants emitted from the exhaust system of a vehicle as defined in the *Highway Traffic Act*.

2.2 Reporting Criteria for Criteria Air Contaminants and Greenhouse Gases Listed in Table 2A

The regulation requires that the owner and operator of a facility to which this section applies is required to calculate the air emissions of contaminants listed in Table 2A of the Guideline during a calendar year if any one or more of the following criteria are satisfied:

1. The facility can reasonably be expected to use coal, refuse, wood or waste oil as fuel at any time during the year.
2. The facility can reasonably be expected to have, at any time during the year, a name plate capacity of greater than 3 million British Thermal Units per hour.
3. The facility can reasonably be expected to use 3,000 kilograms or more of solvents during the year.
4. The facility can reasonably be expected to use 3,000 kilograms or more of coating materials during the year.
5. The facility can reasonably be expected to use 3,000 kilograms or more of printing ink during the year.
6. The facility can reasonably be expected to use 5,000 kilograms or more of welding rods or welding wires during the year.

Table 3 to this Guideline outlines the criteria and applicability of this provision for various facilities by sector.

Facilities that meet any one or more of the above requirements should proceed to consult Sections 3 and 4 of the Guideline for assistance in identifying reportable contaminants and general procedures for calculating emissions. Section 5 should be consulted for direction on reporting annual (see Section 5.1), smog season (see Section 5.2), and quarterly emissions (see Section 5.5), as required. Section 6 provides direction on record keeping provisions.

2.3 Reporting Criteria for Contaminants with MOE Graded MPO Thresholds Listed in Table 2B

Owners and operators of facilities must ensure that air emissions of contaminants in Table 2B are monitored and reported for the calendar year if the contaminant is manufactured or processed or otherwise used at a facility during the year and both of the following criteria are satisfied:

1. The facility can reasonably be expected to employ or engage persons who will together work a total of 20,000 hours or more during the year.

2. The contaminant can reasonably be expected to be manufactured or to be processed or otherwise used at the facility during the year in an amount equal to or greater than the threshold amount for the contaminant set out in Table 2B to the Guideline.

The amount of a contaminant that “can reasonably be expected to be manufactured or to be processed or otherwise used" at a facility during the calendar year shall be determined by including the amount of the contaminant that was manufactured at the facility at a concentration greater than or equal to 1% by weight (with the exception of contaminants considered to be by-products) and the amount of the contaminant that was processed or otherwise used at the facility at a concentration greater than or equal to 1% by weight (with the exception of contaminants considered to be by-products). If the contaminant is a by-product, its total weight at any concentration must be included. Care must be taken to avoid double counting in situations where a contaminant is both an input to a process and a manufactured product at the facility.

For assistance in calculating and reporting the total quantities of Table 2B contaminants that are manufactured or processed or otherwise used, including by-products, please refer to the NPRI[16] guideline document and see Section 5.3 of the Guideline for further details.

2.4 Reporting Criteria for Contaminants with NPRI Thresholds Listed in Table 2C

If, pursuant to a notice published under Section 46 of the *Canadian Environmental Protection Act, 1999* (Canada) in connection with the National Pollutant Release Inventory (NPRI), a person is required to provide the federal Minister of the Environment with information on the release from a facility into the air of a contaminant listed in Table 2C to the Guideline, the person shall send a copy of that information to the Director at the same time that it is provided to the federal Minister.

The intention of the regulation is to ensure that Ontario compiles a complete inventory of contaminant emissions. To avoid duplication with the federal NPRI program requirements, contaminants common to both the provincial and federal contaminant lists were separated out into Table 2C. Facilities reporting to NPRI are required by O.Reg. 127/01 to copy the Director with information on air releases compiled and submitted to the federal Minister pursuant to the NPRI program.

3 CONTAMINANT EMISSIONS

The owner and operator of a facility that meets the screening criteria for Table 2A or 2B has a duty under the regulation to calculate and report total facility air emissions of the contaminants listed in these tables. The MOE recognizes that different facilities will generate different emissions, and does not expect every owner and operator of a facility to calculate and report on every contaminant listed in Tables 2A, 2B and 2C. Only those contaminants discharged by the individual facility are required to be calculated and reported.

The MOE considers that a person who owns or operates a facility is in the best position to know what contaminants are used and generated by the facility, however, to assist in determining what contaminants might be emitted, the owner and operator of a facility can use Appendices B, C, and D as a guide. These Appendices provide lists of contaminants commonly associated with fuel combustion processes (Appendix B), solvent evaporation processes (Appendix C), and process emissions specific to relevant sectors (Appendix D). This information is extracted from USEPA FIRE[4] emission factors and SPECIATE[7] speciation databases.

Additional contaminants are reportable if the owner and operator of a facility reported the contaminants to the NPRI as a release to air, even though they are not listed in Appendices B, C, or D.

4 CALCULATING EMISSIONS

Facilities required to calculate emissions will need to follow these steps:

- Identify emission sources within the facility;
- Select emission estimation methodology;
- Gather supporting information for calculating emissions; and
- Calculate emissions.

4.1 Identify Emission Sources Within the Facility

The first step is very important because it will identify any process within the facility that may generate emissions of contaminants. Information on emission sources may be available from plant operation personnel or from published emission inventory handbooks[1, 3, 4, 18]. An example is AP-42[1] which is published by the United States Environmental Protection Agency (USEPA). AP-42 provides process flow diagrams[a] and details regarding the general operation, emission sources, applicable emission control techniques and emission factors associated with various industries. To facilitate electronic data manipulation, a coding system (Source Classification Code, SCC[25]) is used to identify these emission related processes.

In general, these processes can be grouped into 5 categories:

i) Combustion (e.g., boiler, furnace, heater, etc.);
ii) Manufacturing (e.g., blast furnace, chrome-plating, etc.);
iii) Solvent evaporation (e.g., degreasing, cleaning, printing, painting, etc.);
iv) Storage (e.g., silos, tanks, etc.); and
v) Fugitive (e.g., exposed storage piles, road dust, equipment leakage, etc.).

4.1.1 Combustion

Combustion can be external (e.g., boilers, furnaces, space heaters, etc.) or internal (e.g., diesel generators, internal combustion engines, etc.). The primary activity in combustion is the burning of fuel (e.g., coal, oil, gas, etc.) to generate thermal or mechanical energy. The input material to the combustion equipment is the type and quantity of fuel consumed. It should be noted that there are some processes that also involve the input of fuel but are not considered to be combustion processes in this context. For example, coke ovens and blast furnaces involve fuel input, but are considered to be manufacturing processes.

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[a] A process flow diagram is a schematic diagram which shows the possible equipment/devices and steps that may exist in a manufacturing process and how they are related. It also shows the flow of both the input raw materials and processed materials to and from various equipment/devices. The possible emission points and the contaminants may be indicated.

Where a reporting facility includes numerous individual space heaters, only one emission source is to be defined for each fuel type.

4.1.2 Manufacturing

The list of manufacturing processes is extensive and depends on the nature of the facility and its various components. Emissions can exist at every stage of the manufacturing process or at the final stage of the manufacturing process. For example, in a foundry operation, emissions occur at each stage of the operation (i.e., casting cooling, casting shakeout, casting knock out, casting cleaning, casting finishing, sand handling, core making, core baking, heat treatments, grinding, etc.). Conversely, in an electroplating process, the emissions primarily occur at the electroplating baths.

4.1.3 Solvent Evaporation

Solvents evaporate in activities such as cleaning, degreasing, thinning, coating (painting), printing, dry cleaning, etc. The solvent vapour is either allowed to evaporate to the atmosphere or is captured for emission control (e.g., incineration) or vapour recovery.

In cases where the solvent is used for general purposes that cannot be associated with a definite process (e.g., cleaning, thinning, etc.) one emission source is to be identified for each type of solvent usage.

4.1.4 Storage

Volatile compounds may be emitted to the atmosphere during storage (standing/breathing loss) and during loading and unloading of the stored material (working/withdrawal loss). Particulates may also be emitted during the loading and unloading operation of storage silos. There are various emission control techniques available to reduce the emission of volatile compounds or particulates.

4.1.5 Fugitive

Generally, fugitive emissions occur at different stages in the manufacturing process(es) (e.g., equipment leakage at pumps, valves, flanges, coke oven doors, etc.). Fugitive emissions can also come from unpaved roads due to traffic movement, wind erosion of exposed storage piles, etc.

For any of the above categories, there are various emission control devices available to reduce emissions of certain contaminants.

It should be noted that a discharge unit may have more than one process associated with it. Examples are:

i) A combustion boiler which burns both oil and natural gas. In this situation, there will be two processes (two SCCs) to differentiate emissions from oil burning and gas burning.
ii) A gasoline or volatile organic solvent storage tank which incurs both standing loss and working loss requires the identification of two processes.

A complete list of the potential emission sources must be compiled together with the assigned SCC and information on the control efficiency of the emission control devices. This list will help to determine the appropriate emission estimation methodology to be used for each process.

4.2 Select Emission Estimation Methodology

There are several methodologies available for calculating air emissions from the processes at the facility. The choice of emission estimation method used is dependent upon the available data. In general, site-specific data that are representative of normal operations at a facility's site are preferred over industry-average data (such as emission factors). The following paragraphs give a general description of the common emission estimation methodologies available to facilities. Refer to the corresponding referenced documents for detailed information on the implementation and application of the emission estimation methodologies. Examples of emission calculations using the following estimation methods are presented in Appendix A.

Besides the following listed methodologies, emission estimation methods and information compiled for compliance with EPA Regulation 346 may also be used to estimate annual and smog season emissions for this regulation[17]. Methods other than those listed may be used if approved by the Director. To obtain approval for the use of an alternate method, it is the responsibility of the owner and operator of a facility to provide documentation and justification for the proposed method and to obtain written approval from the Director before the beginning of the reporting year.

The facility must select methodologies that are applicable to the facility's emission processes. In most cases, a combination of methodologies will be required by the facility. For example, an installed continuous emission monitoring system (CEMS) can be used for calculating SO_2 and NO_X emissions from a boiler; source testing results may be used for calculating VOC emissions, controlled with an incinerator, from a surface coating operation; mass balance may be used for calculating cleaning solvent loss; and emission factors may be used for material handling.

Any of the methodologies listed below will be acceptable for the calculation of emissions in most cases, however, please note that if a facility is one of those required by Section 3(4) of the regulation to use an emissions monitoring system, the methodology used must be one referred to in section 5.5 of this Guideline.

Once the methodology has been selected, the owner and operator of a facility shall follow the directions as set out below for the selected methodology.

4.2.1 Continuous Emission Monitoring System (CEMS)

A CEMS[7,8] provides a continuous record of emissions over an extended and uninterrupted period of time. Various principles are employed to measure the concentration of contaminants in the gas stream; they are usually based on photometric measurements. Once the contaminant concentration and the flow rate is known, emission rates can be obtained by multiplying the contaminant concentration by the volumetric stack gas flow rate. The emissions can then be calculated from this data.

Appendix A.1 presents an example of how to use CEMS results to calculate emissions.

4.2.2 Predictive Emission Monitoring (PEM)

PEM[7,8] is based on developing a correlation between contaminant emission rates and process parameters (e.g., fuel usage, steam production or furnace temperature) and could be considered a hybrid of continuous monitoring, emission factors and stack tests. A correlation test must first be performed to develop the relationship between contaminant emission rates and process parameters. Emissions can then be calculated or predicted using process parameters to predict emission rates based on the results of the initial source test. For example, emissions of particulates from a boiler could be predicted based on the correlation of the particulate emissions to the fuel flow rate.

Appendix A.2 presents an example of how to use PEM results to calculate emissions.

4.2.3 Source Testing

Source testing[9,10,19,20] provides a "snapshot" of emissions during the period of the test. Samples are collected using probes inserted into the exhaust stack, and contaminants are collected in or on various media and sent to a laboratory for analysis or are analysed on-site. Contaminant concentrations are obtained by dividing the amount of contaminant collected during the test by the volume of the sample. Emission rates are then determined by multiplying the contaminant concentration by the volumetric stack gas flow rate. Emission loadings are then determined from these emission rates and the total period of operation.

Appendix A.3 presents an example of how to use source testing results to calculate emissions.

4.2.4 Mass Balance

Mass balance (material balance) is based on the application of the law of conservation of mass to the process. Essentially, if there is no accumulation within the system, then all the materials that go into the system must come out.

Fuel analysis[11,12,13] data is a good example of the mass balance approach in predicting emissions. For example, if the concentration of a contaminant or contaminant precursor in a fuel is known, emissions of that contaminant can be calculated by assuming that all of the contaminant is emitted prior to the application of an emission control. This approach is appropriate for contaminants such as metals, SO_2, VOCs and CO_2. Mass balance should not be used to estimate NO_X emissions because of the high variability of emissions in most combustion processes. It should be noted, however, that some of the contaminants will require further analysis to determine the portion emitted to the atmosphere since some of these contaminants may end up in various physical or chemical states[14,15] (ash, etc.) and not emitted to the atmosphere.

The general equation for the mass balance approach is:

$$M_e = M_i - M_p - M_a - M_c$$

Where M_e = Mass of compound A emitted
M_i = Mass of compound A in the raw material feed
M_p = Mass of compound A in the finishing product
M_a = Mass of compound A accumulated in the system
M_c = Mass of compound A captured for recovery or disposal

Appendices A.4 and A.5 present examples of how to use the mass balance approach to calculate emissions.

4.2.5 Emission Factors

Emission factors are available for many emission source categories and are based on the results of source tests performed at one or more facilities within an industry. Basically, an emission factor is the contaminant emission rate relative to the level of source activity. Emission factors have been compiled by the USEPA for criteria and toxic contaminants [AP-42 document[3], the Locating and Estimating Air Emissions (L&E) series of documents[1], the Factor Information Retrieval (FIRE) System[2], EIIP documents[4], the VOC/Particulate Matter (PM) Speciation Database Management System (SPECIATE)[5] and PM Calculator[6]]. Emission factors compiled by specific industrial associations or by other agencies[18] may also be available.

The facility may be able to develop its own emission factors based on direct monitoring (CEMS/PEM) or measurement (source testing) results. Facility-specific established emission factors (mass of emission per unit time, mass of emission per input material flow, or mass of emission per unit output production) will be applicable to the measured processes or similar equipment/processes of other facilities when the operating conditions are comparable. Generic emission factors are commonly used when site-specific source monitoring data are unavailable.

The basic equation used in an emission factor emissions calculation is:

$$E_X = BQ * EF_X * \frac{100 - CE_X}{100}$$

Where: E_X = Emission of contaminant x, kg
BQ = Activity rate or base quantity (BQ), BQ unit
EF_X = Uncontrolled emission factors of contaminant x, kg/BQ unit
CE_X = Overall emission control efficiency of contaminant x, %

or

$$E_X = BQ * CEF_X$$

Where: E_X = Emission of contaminant x, kg
BQ = Activity rate or base quantity (BQ), BQ unit
CEF_X = Controlled emission factors of contaminant x, kg/BQ unit

Appendix A.6 presents an example of how to use generic emission factors to calculate emissions.

4.2.6 *Emission Estimation Model*

There are some emission estimation models and/or algorithms that estimate emissions from various emission sources. For example, USEPA TANKS[6] software is commonly used to estimate VOC emissions from storage tanks. The Landfill Gas Emissions Model[6] software may be used to calculate the air contaminant emissions from municipal solid waste landfills.

Appendix A.7 presents an example of how to use the road dust algorithm to calculate emissions from road dust.

4.2.7 *Engineering Calculation*

A significant volume of data pertaining to emission estimating factors and methodologies has been assembled by Environment Canada and the U.S. Environmental Protection Agency. Nevertheless, a large data gap in certain processes still remains where emission test data or published emission factors for VOC discharges are either not available, or not appropriate. In such cases, sound engineering assessment is the best approach to determine process factors and base quantity values. To apply an engineering assessment method, there are four basic principles which should be followed:

(i) Review all data pertaining to the specific emission source and to the industrial sector in general;

(ii) Use this data to provide gross approximations and refine these using sound engineering principles as data becomes available to provide more accurate estimations;
(iii) Whenever possible, alternate methods of calculation should be conducted to cross-check each level of approximation; and
(iv) Employ good record keeping which involves documenting all related information for further emission refinement when more accurate data becomes available.

There are additional examples presented in Appendix A which will provide reference for calculating emissions.

4.3 Gather Supporting Information for Calculating Emissions

Once the emission estimation methodologies have been chosen for the emission sources, the next step is to gather the necessary information required by the specific methodology. Since facility processes and related emission estimation methodologies are diverse, it is not possible to provide a comprehensive list of exactly what information is required in each situation. The following paragraphs provide generalized requirements for the supporting information.

4.3.1 Combustion

For large combustion boilers, CEMS may be installed, which provide a continuous record of emissions of monitored contaminants. CEMS can then be programmed to monitor the total emissions in a selected interval (e.g., hourly, daily, etc.) when there is no downtime of the CEMS. Reference 8 provides more details on how to report emissions using CEMS.

Other methodologies may be used to calculate emissions. The following information is required for combustion processes:
(a) Process Identifier - reference ID
(b) Process Description - description of process and assigned SCC
(c) Combustion Equipment Type - reference for selecting emission factors
(d) Combustion Equipment Parameters - reference for selecting emission factors
(e) Process Activity - the quantity of fuel burned
(f) Fuel Analysis - for mass balance
(g) Installed Control Device
(h) Controlling Contaminant(s) and Control Efficiency(ies)
(i) Exhaust Stack/Vent ID & Description

Items (b), (c) and (d) are useful for obtaining the SCC that best describes the combustion process and the emission factors for a certain set of contaminants. Item (e) provides the quantity of input material to the combustion equipment and will be used by mass balance and emission factor methodologies. Fuel consumption can be obtained from utility bills or from acquisition records. When the fuel consumption of an individual combustion equipment is not measured, it may be necessary to apportion the total facility consumption based on the capacity and operating time of each equipment. Item (f), fuel analysis (physical characteristics and fuel composition), can be obtained from the fuel supplier or performed by analytical laboratories. Fuel analysis provides information on the contaminant contained in the fuel and the potential emissions. Mass balance can then be used to calculate the emissions of certain metal contaminants. Item (h) is the control efficiency of the installed emission control device/technique (g) and is available from the device manufacturer or from on-site test results.

4.3.2 Manufacturing

Stack testing results and emission factors are the most common methods used for calculating emissions from manufacturing processes. Supporting information required for manufacturing processes is similar to that needed for combustion processes.

The following information is required for manufacturing processes:
(a) Process Identifier - reference ID
(b) Process Description - description of process and assigned SCC
(c) Process Activity - the quantity of material fed or produced
(d) Installed Control Device
(e) Controlling Contaminant(s) and Control Efficiency(ies)
(f) Exhaust Stack/Vent ID & Description

Item (b) is required to obtain the SCC that describes the manufacturing process and the emission factors of certain contaminants. Item (c) provides the quantity of input raw material to the process equipment or final product produced. This information will be used by emission factor methodologies. Item (e) is the control efficiency of the installed emission control device/technique (d) and is available from the device manufacturer or from on-site test results.

4.3.3 Solvent Evaporation

Mass balance, emission factors and stack testing results are the most common methods used for calculating emissions from solvent evaporation processes. Supporting information required for solvent evaporation processes is similar to that for combustion processes.

The following information is required for solvent evaporation processes:
(a) Process Identifier - reference ID
(b) Process Description - description of process and assigned SCC
(c) Process Activity - the quantity of solvent used
(d) Solvent Physical Properties/Composition - for mass balance
(e) Installed Control Device/Techniques
(f) Controlling Contaminant(s) and Control Efficiency(ies)
(g) Exhaust Stack/Vent ID & Description

Item (b) is required to obtain the SCC that describes the solvent evaporation process and the associated emission factors. Item (c) provides the quantity of solvent used for the process; this information will be used by emission factor methodologies. Solvent consumption can be obtained from an acquisition record. When the solvent consumption for an individual process is not measured, it may be necessary to apportion the total facility consumption based on the capacity and operating time of each process. Item (d), solvent physical properties/composition information, can be obtained from the Material Safety Data Sheet (MSDS) that comes with the solvent. The MSDS lists the concentration of hazardous contaminants in various solutions and can be used to calculate the emissions of the contaminant. Item (f) is the control efficiency of the installed emission control device/technique (e) and is available from the device manufacturer or from on-site test results.

4.3.4 Storage

The USEPA has developed the emission estimation model TANKS. This model requires information on materials stored and physical parameters/design of storage tanks in order to generate the emission factors for a particular tank and material combination. This model will be useful in facilities that have huge storage tanks that store volatile liquids. Examples are petroleum refineries and bulk terminal/plants. Owing to the complexity of this model, there are emission factors generated for common tank configurations and material stored.

The following information is required when the emission factor method is used:

(a) Storage Tank Identifier - reference ID
(b) Tank Description - description of tank/material stored and assigned SCC
(c) Process Activity - capacity of the storage tank
(d) Process Activity - throughput of storage tank
(e) Installed Control Device/Techniques
(f) Controlling Contaminant(s) and Control Efficiency(ies)
(g) Exhaust Stack/Vent ID & Description

Item (b) is required to obtain the SCC that describes the storage tank configuration, material stored and the associated emission factors. There are two process identifiers required for storage tank emissions. Items (c) and (d) provide activity information related to the operation of the tank for the application of emission factor methodologies. Item (f) is the control efficiency of the installed emission control device/technique (e) and is available from the device manufacturer or from on-site test results.

4.3.5 Fugitive

The quantitative analysis of fugitive emissions may require field measurements or the use of computer models. There have been some emission factors developed for selected fugitive emissions such as equipment leakage at pumps and valves, flanges in petroleum refineries, leaks at coke oven doors/seals, or wind erosion of exposed storage piles. The information required for calculating fugitive emissions varies depending on the nature of the emission sources and the methodologies used. Consult Table 7 for information required for typical fugitive emission sources.

4.4 Calculate Emissions

When all emission processes are identified, emission methodologies are selected, and related information is assembled, the next step is to calculate the emissions.

If CEMS is used, it can be programmed to monitor the total emissions in a selected interval (e.g., hourly, daily, etc.). The direct output of the CEMS emissions can be used when there is no downtime of the CEMS. Reference 8 provides more detail on how to report emissions using CEMS.

When other methods are used, the equation below [also shown in Section 4.2.5 (emission factors)] can be used to generalize the emission calculation procedure:

$$E_X = BQ * EF_X * \frac{100 - CE_X}{100}$$

Where: E_x = Emission of contaminant *x*, kg
BQ = Activity rate or base quantity (BQ), BQ unit
EF_x = Uncontrolled emission factors of contaminant *x*, kg/BQ unit
CE_x = Overall emission control efficiency of contaminant *x*, %

or

$$E_X = BQ * CEF_X$$

Where: E_x = Emission of contaminant *x*, kg
BQ = Activity rate or base quantity (BQ), BQ unit
CEF_x = Controlled emission factors of contaminant *x*, kg/BQ unit

To use PEM, a correlation must be developed between the emission rate and monitored activity levels (e.g., coal feed in a boiler, lime production in a lime kiln). These established emission factors will be used to calculate the emissions when the total activity rate (e.g., total coal consumption, total lime production) within the period is known. Care should be taken to determine whether the emission rates are derived before or after any control devices. If the emission measurement is conducted before any control devices, the emission rate is uncontrolled and control efficiencies of the devices must be considered in the first equation. When the emission measurement is conducted after all control devices, the emission rate is controlled. Therefore, the second equation should be used since control efficiencies of the devices have already been included.

Use the first equation if the emission factors are uncontrolled. For controlled emission factors, select the proper emission factors associated with a similar control device and use the second equation. When no controlled emission factors are available for the control device, use the uncontrolled emission factors together with the control efficiency in the first equation.

The USEPA has established SCC coding to facilitate emissions calculation using generic emission factors. The USEPA AP-42 or FIRE emission factors are identified with the SCC and the contaminant name. Computer algorithms may be developed to perform the emission calculation automatically with the SCC as a reference code.

When the mass balance method is used, emissions can be calculated with an analysis of the fate of the contaminants.

Emission estimation models or formulas are different depending on their application; users should consult the relevant user guides or manuals for the application of these models. Some of the model outputs will generate emission factors for a particular system at certain conditions. The general emission factor equation needs to be used to calculate the final emissions.

5 REPORTING EMISSIONS

The regulation requires the facility to report annual and smog season emissions data, and quarterly data using an emissions monitoring system should the respective monitoring and reporting requirements be met. Annual and smog season reports for a given year are due on June 1st of the following year, and quarterly reports are due 60 days after the end of each quarter. The parameters to be reported for annual and smog season data are listed in Table 5, and are listed in Table 6 for quarterly emissions monitoring system data.

The regulation provides that reports are to be submitted in a form approved by the Director. The Director intends to advise on what format is approved prior to the first reporting deadline. It is intended that the approved form will be an electronic one. The regulated community will be advised when the approved form is available.

It is also intended that reported data be compiled and be accessible electronically.

5.1 Table 2A Criteria Air Contaminants and Greenhouse Gases - Annual Reporting

For release based threshold contaminants in Table 2A, the facility has to compare the calculated total facility emissions of the contaminants one by one against their respective reporting thresholds. The facility total annual emissions for each contaminant are generated by summing the emissions of individual processes. If the contaminant emissions are equal to or greater than the reporting threshold, the annual emission value must be reported. If not, the contaminant name has to be reported and identified with assigned codes indicating that the emission is below the reporting threshold or that there is no emission reportable.

A facility that is a university or college of applied arts and technology or an office building, hotel, shopping centre or similar commercial building is required to report only SO_2, NO_X, and HFC-134A emissions, from heating or cooling systems, that are equal to or greater than reporting thresholds.

5.2 Table 2A Criteria Air Contaminant (CAC) - Smog Season Reporting

The reporting facility is also required to report CAC emissions for the smog period (May 1st to September 30th) for each CAC in Table 2A that is equal to or greater than its respective annual reporting threshold.

5.3 Table 2B Contaminants with MOE Graded MPO Thresholds - Annual Reporting

This section of the Guideline shall be used for calculating the total quantities of Table 2B contaminants that are manufactured or processed or otherwise used, including by-products. The terms "manufacture", "process", and "otherwise use" are used by the federal NPRI[16] program, and have been reproduced in the Glossary at the beginning of this Guideline.

A facility is required to calculate and report the emissions of a contaminant listed in Table 2B only if it meets all of the screening criteria outlined in Section 2.3 of the Guideline. For example, the facility does not have to calculate and report the emissions of a contaminant in Table 2B if that contaminant was never manufactured, processed, or otherwise used at the facility during the reporting year.

The reporting threshold is based on the quantity of the contaminant (in Table 2B) manufactured or processed or otherwise used at the facility at concentrations equal to or greater than 1% plus the quantity of the same contaminant, at any concentration, that is considered to be a by-product which is released on-site to the environment or transferred off-site for disposal.

According to the NPRI[16] guideline document, when calculating the reporting threshold, include the quantity of the contaminant that is:

- manufactured at a concentration equal to or greater than 1%;
- processed at a concentration equal to or greater than 1%;
- otherwise used at a concentration equal to or greater than 1%;
- a by-product, at any concentration, released on-site to the environment;
- a by-product, at any concentration, transferred off-site for disposal.

For contaminants (in Table 2B) equal to or greater than 1% concentration, the total quantity manufactured or processed or otherwise used at any time or in any part of the facility must be included in the calculation for comparison to the corresponding threshold. For example, the quantity of a contaminant received by a facility at 30% concentration and then diluted to less than 1% for use must be included in the calculation for comparison to the corresponding threshold. The same will apply for a contaminant received at the facility at less than 1% and subsequently concentrated to 5%.

Following the NPRI[16] approach to reporting, any contaminants that are recycled off-site and returned to the facility should be treated as the equivalent of newly purchased material for the purpose of threshold determination. Since a contaminant may undergo many processes in a facility, care should be taken not to double-count process streams when calculating the reporting threshold.

For examples on how to calculate the total quantity manufactured, processed or otherwise used, the percent by weight, and by-products for contaminants, please refer to the NPRI[16] guideline document. Appendix A.4 of this Guideline provides an example of how to calculate the total quantity of contaminants manufactured, processed or otherwise used.

Only upon determining that all of the screening criteria in Section 2.3 of the Guideline have been met shall the facility proceed to calculate (using estimation methods outlined in Section 4 of the Guideline) and report the emissions of a contaminant listed in Table 2B.

5.4 Table 2C Contaminants with NPRI Thresholds - Annual Reporting

To comply with O.Reg. 127/01, any facility described in Table 1 of this Guideline that is required to report to the federal Minister pursuant to the NPRI program and the Notice published in the *Canada Gazette* for that purpose, is required to copy the Director with the air releases portion of the report provided to the federal government.

5.5 Emissions Monitoring System and Quarterly Reporting of NO_X and SO_2

If a reporting facility has a discharge unit with a name plate capacity of more than 73 megawatts total energy input and the annual amount of sulphur dioxide and/or oxides of nitrogen discharged by the unit can reasonably be expected to be equal to or greater than the respective reporting thresholds [i.e., 20 tonnes for sulphur dioxide and 14 tonnes for oxides of nitrogen (expressed as NO)], NO_X and/or SO_2 reporting is required on a quarterly basis using an emission monitoring system.

“Emissions monitoring system” means a system designed to monitor emissions of specific contaminants based on any of the following suite of options which provide at least the accuracy typically obtained through source testing conducted in accordance with the Ontario Source Testing Code[20], or better (see Table 4).

These methods are namely:

- CEMS
- PEM
- Source testing
- Mass balance (the mass balance method cannot be used to estimate NO_x emissions)
- Site specific emission factors [that are verified for accuracy from three separate source tests done in accordance with the Ontario Source Testing Code or other relevant Canadian or U.S. methods (see Table 4)]
- Published emission factors (with USEPA ratings A, B and C for known industrial processes)
- Emission estimation models and engineering calculations
- Any other methods approved by the Director (allowing for future development of methods)

6 RECORD KEEPING

The regulation requires the owner and operator of a facility to ensure that a copy of the report and of any record prepared for the purpose of the report is kept for at least seven years after the day the report is required to be submitted. The report and/or the related records are to be made available to the MOE upon request. The regulation also specifies that records be prepared and maintained in accordance with the Guideline. The following sections outline the requirements for record keeping.

6.1 Record Keeping For Annual And Smog Season Emissions

If a facility is required to perform annual and smog season monitoring and reporting, it must keep records, in electronic format, of the applicable parameters listed in Table 7, for a period of 7 years (see Table 7 for the list of parameters).

6.2 Record Keeping For Quarterly Emissions - Emission Monitoring System NO_x and SO_2 Emissions

If a facility is required to perform quarterly monitoring and reporting, it must keep records, in electronic format, of the applicable parameters listed in Table 8 for a period of 7 years (see Table 8 for the list of parameters).

Table 1

Source Sectors for Airborne Contaminant Discharge Reporting

SECTOR DESCRIPTION WITH NAICS[24] CODES	
CLASS A - ELECTRICITY GENERATION	
ELECTRIC POWER GENERATION	
221111	Hydro-Electric Power Generation
221112	Fossil-Fuel Electric Power Generation
221113	Nuclear Electric Power Generation
221119	Other Electric Power Generation
CLASS B - LARGE SOURCES	
METAL ORE MINING	
212210	Iron Ore Mining
212220	Gold and Silver Ore Mining
212231	Lead-Zinc Ore Mining
212232	Nickel-Copper Ore Mining
212233	Copper-Zinc Ore Mining
212291	Uranium Ore Mining
212299	All Other Metal Ore Mining
NON-METALLIC MINERALS MINING AND QUARRYING	
212314	Granite Mining and Quarrying
212315	Limestone Mining and Quarrying
212316	Marble Mining and Quarrying
212317	Sandstone Mining and Quarrying
212323	Sand and Gravel Mining and Quarrying
212326	Shale, Clay and Refractory Mineral Mining and Quarrying
212394	Asbestos Mining
212395	Gypsum Mining
212396	Potash Mining
NATURAL GAS DISTRIBUTION	
221210	Natural Gas Distribution
WATER, SEWAGE AND OTHER SYSTEMS	
221330	Steam and Air-Conditioning Supply
TEXTILE MILLS AND TEXTILE MILL PRODUCTS	
313110	Fibre, Yarn and Thread Mills
313210	Broad-Woven Fabric Mills
313310	Textile and Fabric Finishing
313320	Fabric Coating
314110	Carpet and Rug Mills
WOOD PRODUCT MANUFACTURING	
321111	Sawmills (except Shingle and Shake Mills)
321112	Shingle and Shake Mills

SECTOR DESCRIPTION WITH NAICS[24] CODES	
321114	Wood Preservation
321211	Hardwood Veneer and Plywood Mills
321212	Softwood Veneer and Plywood Mills
321215	Structural Wood Product Manufacturing
321216	Particle Board and Fibreboard Mills
321217	Waferboard Mills
321911	Wood Window and Door Manufacturing
PULP, PAPER AND PAPERBOARD MILLS	
322111	Mechanical Pulp Mills
322112	Chemical Pulp Mills
322121	Paper (except Newsprint) Mills
322122	Newsprint Mills
322130	Paperboard Mills
CONVERTED PAPER PRODUCT MANUFACTURING	
322211	Corrugated and Solid Fibre Box Manufacturing
322212	Folding Paperboard Box Manufacturing
322219	Other Paperboard Container Manufacturing
322220	Paper Bag and Coated and Treated Paper Manufacturing
322230	Stationery Product Manufacturing
322291	Sanitary Paper Product Manufacturing
PRINTING AND RELATED SUPPORT ACTIVITIES	
323113	Commercial Screen Printing
323116	Manifold Business Forms Printing
323119	Other Printing (Includes Commercial Lithographic, Gravure and Flexographic Printing)
PETROLEUM REFINING AND DISTRIBUTION	
324110	Petroleum Refineries
412110	Petroleum Product Wholesaler-Distributors *(For gasoline bulk plants and terminals only)*
ASPHALT, OTHER PETROLEUM AND COAL PRODUCTS	
324121	Asphalt Paving Mixture and Block Manufacturing
324122	Asphalt Shingle and Coating Material Manufacturing
324190	Other Petroleum and Coal Products Manufacturing
CHEMICAL MANUFACTURING	
325110	Petrochemical Manufacturing
325120	Industrial Gas Manufacturing
325130	Synthetic Dye and Pigment Manufacturing
325181	Alkali and Chlorine Manufacturing
325189	All Other Basic Inorganic Chemical Manufacturing
325190	Other Basic Organic Chemical Manufacturing
325210	Resin and Synthetic Rubber Manufacturing
325220	Artificial and Synthetic Fibres and Filaments Manufacturing
325313	Chemical Fertilizer (except Potash) Manufacturing
325314	Mixed Fertilizer Manufacturing

SECTOR DESCRIPTION WITH NAICS[24] CODES	
325320	Pesticide and Other Agricultural Chemical Manufacturing
325410	Pharmaceutical and Medicine Manufacturing
325510	Paint and Coating Manufacturing
325520	Adhesive Manufacturing
325610	Soap and Cleaning Compound Manufacturing
325620	Toilet Preparation Manufacturing
325910	Printing Ink Manufacturing
325920	Explosives Manufacturing
325991	Custom Compounding of Purchased Resins
325999	All Other Miscellaneous Chemical Product Manufacturing
PLASTICS AND RUBBER PRODUCTS MANUFACTURING	
326111	Unsupported Plastic Bag Manufacturing
326114	Unsupported Plastic Film and Sheet Manufacturing
326121	Unsupported Plastic Profile Shape Manufacturing
326122	Plastic Pipe and Pipe Fitting Manufacturing
326130	Laminated Plastic Plate, Sheet and Shape Manufacturing
326140	Polystyrene Foam Product Manufacturing
326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing
326160	Plastic Bottle Manufacturing
326191	Plastic Plumbing Fixture Manufacturing
326193	Motor Vehicle Plastic Parts Manufacturing
326210	Tire Manufacturing
326220	Rubber and Plastic Hose and Belting Manufacturing
NON-METALLIC MINERAL PRODUCT MANUFACTURING	
327110	Pottery, Ceramics and Plumbing Fixture Manufacturing
327120	Clay Building Material and Refractory Manufacturing
327214	Glass Manufacturing
327215	Glass Product Manufacturing from Purchased Glass
327310	Cement Manufacturing
327320	Ready-Mix Concrete Manufacturing
327330	Concrete Pipe, Brick and Block Manufacturing
327410	Lime Manufacturing
327420	Gypsum Product Manufacturing
327910	Abrasive Product Manufacturing
IRON AND STEEL MILLS AND FERRO-ALLOY MANUFACTURING	
331110	Iron and Steel Mills and Ferro-Alloy Manufacturing
STEEL PRODUCT MANUFACTURING FROM PURCHASED STEEL	
331210	Iron and Steel Pipes and Tubes Manufacturing from Purchased Steel
331221	Cold-Rolled Steel Shape Manufacturing
331222	Steel Wire Drawing
ALUMINA AND ALUMINUM PRODUCTION AND PROCESSING	
331313	Primary Production of Alumina and Aluminum
331317	Aluminum Rolling, Drawing, Extruding and Alloying

SECTOR DESCRIPTION WITH NAICS[24] CODES	
NON-FERROUS METAL (EXCEPT ALUMINUM) PRODUCTION AND PROCESSING	
331410	Non-Ferrous Metal (except Aluminum) Smelting and Refining
331420	Copper Rolling, Drawing, Extruding and Alloying
331490	Non-Ferrous Metal (except Copper and Aluminum) Rolling, Drawing, Extruding and Alloying
FOUNDRIES	
331511	Iron Foundries
331514	Steel Foundries
331523	Non-Ferrous Die-Casting Foundries
331529	Non-Ferrous Foundries (except Die-Casting)
FABRICATED METAL PRODUCT MANUFACTURING	
332113	Forging
332118	Stamping
332210	Cutlery and Hand Tool Manufacturing
332311	Prefabricated Metal Building and Component Manufacturing
332314	Concrete Reinforcing Bar Manufacturing
332319	Other Plate Work and Fabricated Structural Product Manufacturing
332321	Metal Window and Door Manufacturing
332410	Power Boiler and Heat Exchanger Manufacturing
332420	Metal Tank (Heavy Gauge) Manufacturing
332431	Metal Can Manufacturing
332510	Hardware Manufacturing
332611	Spring (Heavy Gauge) Manufacturing
332619	Other Fabricated Wire Product Manufacturing
332720	Turned Product and Screw, Nut and Bolt Manufacturing
332810	Coating, Engraving, Heat Treating and Allied Activities
332910	Metal Valve Manufacturing
332991	Ball and Roller Bearing Manufacturing
COMPUTER AND ELECTRONIC PRODUCT MANUFACTURING	
334110	Computer and Peripheral Equipment Manufacturing
334210	Telephone Apparatus Manufacturing
334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing
334290	Other Communications Equipment Manufacturing
334410	Semiconductor and Other Electronic Component Manufacturing
334511	Navigational and Guidance Instruments Manufacturing
334512	Measuring, Medical and Controlling Devices Manufacturing
335110	Electric Lamp Bulb and Parts Manufacturing
335120	Lighting Fixture Manufacturing
335210	Small Electrical Appliance Manufacturing
335223	Major Kitchen Appliance Manufacturing
335311	Power, Distribution and Specialty Transformers Manufacturing
335312	Motor and Generator Manufacturing

SECTOR DESCRIPTION WITH NAICS[24] CODES	
335315	Switchgear and Switchboard, and Relay and Industrial Control Apparatus Manufacturing
335910	Battery Manufacturing
335920	Communication and Energy Wire and Cable Manufacturing
335930	Wiring Device Manufacturing
TRANSPORTATION EQUIPMENT MANUFACTURING	
336110	Automobile and Light-Duty Motor Vehicle Manufacturing
336120	Heavy-Duty Truck Manufacturing
336211	Motor Vehicle Body Manufacturing
336212	Truck Trailer Manufacturing
336215	Motor Home, Travel Trailer and Camper Manufacturing
336310	Motor Vehicle Gasoline Engine and Engine Parts Manufacturing
336320	Motor Vehicle Electrical and Electronic Equipment Manufacturing
336330	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing
336340	Motor Vehicle Brake System Manufacturing
336350	Motor Vehicle Transmission and Power Train Parts Manufacturing
336360	Motor Vehicle Seating and Interior Trim Manufacturing
336370	Motor Vehicle Metal Stamping
336390	Other Motor Vehicle Parts Manufacturing
336410	Aerospace Product and Parts Manufacturing
336510	Railroad Rolling Stock Manufacturing
336611	Ship Building and Repairing
336612	Boat Building
336990	Other Transportation Equipment Manufacturing
CLASS C - SMALL SOURCES	
WATER, SEWAGE AND OTHER SYSTEMS	
221320	Sewage Treatment Facilities
FOOD MANUFACTURING (FOR ANIMAL CONSUMPTION)	
311111	Dog and Cat Food Manufacturing
311119	Other Animal Food Manufacturing
FOOD MANUFACTURING (FOR HUMAN CONSUMPTION)	
	This sector applies to facilities using food ingredients which are subject to the Canadian Food and Drug Act in the manufacturing of products for human consumption, who: *a) derive <50% revenues from annual retail sales on premises; OR* *b) utilize combustion with the maximum rated heat input capacity > 10 MMBTU/hour burning fuel other than coal, wood or waste oil.*
311211	Flour Milling
311214	Rice Milling and Malt Manufacturing
311221	Wet Corn Milling
311224	Oilseed Processing
311225	Fat and Oil Refining and Blending
311230	Breakfast Cereal Manufacturing
311310	Sugar Manufacturing
311320	Chocolate and Confectionery Manufacturing from Cacao Beans

SECTOR DESCRIPTION WITH NAICS[24] CODES	
311330	Confectionery Manufacturing from Purchased Chocolate
311340	Non-Chocolate Confectionery Manufacturing
311410	Frozen Food Manufacturing
311420	Fruit and Vegetable Canning, Pickling and Drying
311511	Fluid Milk Manufacturing
311515	Butter, Cheese, and Dry and Condensed Dairy Products Manufacturing
311520	Ice Cream and Frozen Dessert Manufacturing
311614	Rendering and Meat Processing from Carcasses
311615	Poultry Processing
311710	Seafood Product Preparation and Packaging
311814	Commercial Bakeries and Frozen Bakery Product Manufacturing
311821	Cookie and Cracker Manufacturing
311822	Flour Mixes and Dough Manufacturing from Purchased Flour
311823	Dry Pasta Manufacturing
311830	Tortilla Manufacturing
311911	Roasted Nut and Peanut Butter Manufacturing
311919	Other Snack Food Manufacturing
311920	Coffee and Tea Manufacturing
311930	Flavouring Syrup and Concentrate Manufacturing
311940	Seasoning and Dressing Manufacturing
312110	Soft Drink and Ice Manufacturing
312120	Breweries
312130	Wineries
312140	Distilleries
TOBACCO MANUFACTURING	
312210	Tobacco Stemming and Redrying
312220	Tobacco Product Manufacturing
LEATHER AND ALLIED PRODUCT MANUFACTURING	
316110	Leather and Hide Tanning and Finishing
316210	Footwear Manufacturing
316990	Other Leather and Allied Product Manufacturing
MACHINERY MANUFACTURING	
333110	Agricultural Implement Manufacturing
333120	Construction Machinery Manufacturing
333130	Mining and Oil and Gas Field Machinery Manufacturing
333210	Sawmill and Woodworking Machinery Manufacturing
333220	Rubber and Plastics Industry Machinery Manufacturing
333291	Paper Industry Machinery Manufacturing
333310	Commercial and Service Industry Machinery Manufacturing
333413	Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing
333416	Heating Equipment and Commercial Refrigeration Equipment Manufacturing

SECTOR DESCRIPTION WITH NAICS[24] CODES	
333511	Industrial Mould Manufacturing
333519	Other Metalworking Machinery Manufacturing
333611	Turbine and Turbine Generator Set Unit Manufacturing
333619	Other Engine and Power Transmission Equipment Manufacturing
333910	Pump and Compressor Manufacturing
333920	Material Handling Equipment Manufacturing
FURNITURE AND RELATED PRODUCT MANUFACTURING	
337110	Wood Kitchen Cabinet and Counter Top Manufacturing
337121	Upholstered Household Furniture Manufacturing
337123	Other Wood Household Furniture Manufacturing
337126	Household Furniture (except Wood and Upholstered) Manufacturing
337127	Institutional Furniture Manufacturing
337213	Wood Office Furniture, including Custom Architectural Woodwork, Manufacturing
337214	Office Furniture (except Wood) Manufacturing
337215	Showcase, Partition, Shelving and Locker Manufacturing
337910	Mattress Manufacturing
337920	Blind and Shade Manufacturing
TRANSPORTATION OPERATION	
(For maintenance and repair yard only)	
485110	Urban Transit Systems
485210	Interurban and Rural Bus Transportation
COMMERCIAL BUILDINGS	
(Commercial buildings include office buildings, hotels, shopping centres. Report SO_2, NO_x, and HFC-134A emissions from heating or cooling systems if the emissions are equal to or greater than their respective reporting thresholds)	
531120	Lessors (or Owners) of Non-Residential Buildings (except Mini-Warehouses)
TESTING LABORATORIES	
(For product development and testing only)	
541380	Testing Laboratories
WASTE MANAGEMENT AND REMEDIATION SERVICES	
562110	Waste Collection
562210	Waste Treatment and Disposal
562910	Remediation Services
562920	Material Recovery Facilities
562990	All Other Waste Management Services
EDUCATIONAL SERVICES	
(For universities, report SO_2, NO_x, and HFC-134A emissions from heating or cooling systems if the emissions are equal to or greater than their respective reporting thresholds)	
611310	Universities

SECTOR DESCRIPTION WITH NAICS[24] CODES	
HEALTH CARE	
	(For hospitals with incinerators only)
622111	General (except Paediatric) Hospitals
622112	Paediatric Hospitals
622210	Psychiatric and Substance Abuse Hospitals
622310	Specialty (except Psychiatric and Substance Abuse) Hospitals
AUTO REPAIR SERVICES	
811121	Automotive Body, Paint and Interior Repair and Maintenance
DRY CLEANING AND LAUNDRY SERVICES	
	(For bulk dry cleaning depots/plants only)
812320	Dry Cleaning and Laundry Services (except Coin-Operated)
CLASS C - SMALL SOURCES	
	MISCELLANEOUS
OIL AND GAS EXTRACTION	
211113	Conventional Oil and Gas Extraction
211114	Non-Conventional Oil Extraction
COAL MINING	
212114	Bituminous Coal Mining
212115	Subbituminous Coal Mining
212116	Lignite Coal Mining
NON-METALLIC MINERALS MINING AND QUARRYING	
212392	Diamond Mining
212393	Salt Mining
212397	Peat Extraction
212398	All Other Non-Metallic Mineral Mining and Quarrying
SUPPORT ACTIVITIES FOR MINING AND OIL AND GAS EXTRACTION	
213111	Oil and Gas Contract Drilling
213117	Contract Drilling (except Oil and Gas)
213118	Services to Oil and Gas Extraction
213119	Other Support Activities for Mining
ELECTRIC POWER TRANSMISSION AND DISTRIBUTION	
221121	Electric Bulk Power Transmission and Control
221122	Electric Power Distribution
FOOD MANUFACTURING (FOR HUMAN CONSUMPTION)	
	This sector applies to facilities using food ingredients which are subject to the Canadian Food and Drug Act in the manufacturing of products for human consumption, who: *a) derive <50% revenues from annual retail sales on premises; OR* *b) utilize combustion with the maximum rated heat input capacity > 10 MMBTU/hour burning fuel other than coal, wood or waste oil.*
311611	Animal (except Poultry) Slaughtering
311990	All Other Food Manufacturing

SECTOR DESCRIPTION WITH NAICS[24] CODES	
TEXTILE MILLS AND TEXTILE MILL PRODUCTS	
313220	Narrow Fabric Mills and Schiffli Machine Embroidery
313230	Nonwoven Fabric Mills
313240	Knit Fabric Mills
314120	Curtain and Linen Mills
314910	Textile Bag and Canvas Mills
314990	All Other Textile Product Mills
CLOTHING MANUFACTURING	
315110	Hosiery and Sock Mills
315190	Other Clothing Knitting Mills
315210	Cut and Sew Clothing Contracting
315221	Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturing
315222	Men's and Boys' Cut and Sew Suit, Coat and Overcoat Manufacturing
315226	Men's and Boys' Cut and Sew Shirt Manufacturing
315227	Men's and Boys' Cut and Sew Trouser, Slack and Jean Manufacturing
315229	Other Men's and Boys' Cut and Sew Clothing Manufacturing
315231	Women's and Girls' Cut and Sew Lingerie, Loungewear and Nightwear Manufacturing
315232	Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing
315233	Women's and Girls' Cut and Sew Dress Manufacturing
315234	Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket and Skirt Manufacturing
315239	Other Women's and Girls' Cut and Sew Clothing Manufacturing
315291	Infants' Cut and Sew Clothing Manufacturing
315292	Fur and Leather Clothing Manufacturing
315299	All Other Cut and Sew Clothing Manufacturing
315990	Clothing Accessories and Other Clothing Manufacturing
WOOD PRODUCT MANUFACTURING	
321919	Other Millwork
321920	Wood Container and Pallet Manufacturing
321991	Manufactured (Mobile) Home Manufacturing
321992	Prefabricated Wood Building Manufacturing
321999	All Other Miscellaneous Wood Product Manufacturing
CONVERTED PAPER PRODUCT MANUFACTURING	
322299	All Other Converted Paper Product Manufacturing
PRINTING AND RELATED SUPPORT ACTIVITIES	
323114	Quick Printing
323115	Digital Printing
323120	Support Activities for Printing
PLASTICS AND RUBBER PRODUCTS MANUFACTURING	
326198	All Other Plastic Product Manufacturing
326290	Other Rubber Product Manufacturing

SECTOR DESCRIPTION WITH NAICS[24] CODES	
NON-METALLIC MINERAL PRODUCT MANUFACTURING	
327390	Other Concrete Product Manufacturing
327990	All Other Non-Metallic Mineral Product Manufacturing
FABRICATED METAL PRODUCT MANUFACTURING	
332329	Other Ornamental and Architectural Metal Products Manufacturing
332439	Other Metal Container Manufacturing
332710	Machine Shops
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing
MACHINERY MANUFACTURING	
333299	All Other Industrial Machinery Manufacturing
333990	All Other General-Purpose Machinery Manufacturing
COMPUTER AND ELECTRONIC PRODUCT MANUFACTURING	
334310	Audio and Video Equipment Manufacturing
334610	Manufacturing and Reproducing Magnetic and Optical Media
335229	Other Major Appliance Manufacturing
335990	All Other Electrical Equipment and Component Manufacturing
OTHER MISCELLANEOUS MANUFACTURING	
339110	Medical Equipment and Supplies Manufacturing
339910	Jewellery and Silverware Manufacturing
339920	Sporting and Athletic Goods Manufacturing
339930	Doll, Toy and Game Manufacturing
339940	Office Supplies (except Paper) Manufacturing
339950	Sign Manufacturing
339990	All Other Miscellaneous Manufacturing
MISCELLANEOUS WHOLESALER-DISTRIBUTORS	
418190	Other Recyclable Material Wholesaler-Distributors
418410	Chemical (except Agricultural) and Allied Product Wholesaler-Distributors
TRANSPORTATION OPERATION *(For maintenance and repair yard only)*	
481110	Scheduled Air Transportation
481214	Non-Scheduled Chartered Air Transportation
481215	Non-Scheduled Specialty Flying Services
482112	Short-Haul Freight Rail Transportation
482113	Mainline Freight Rail Transportation
482114	Passenger Rail Transportation
483115	Deep Sea, Coastal and Great Lakes Water Transportation (except by Ferries)
483116	Deep Sea, Coastal and Great Lakes Water Transportation by Ferries
486110	Pipeline Transportation of Crude Oil
486210	Pipeline Transportation of Natural Gas
486910	Pipeline Transportation of Refined Petroleum Products
486990	All Other Pipeline Transportation

SECTOR DESCRIPTION WITH NAICS[24] CODES	
SUPPORT ACTIVITIES FOR TRANSPORTATION	
488111	Air Traffic Control
488119	Other Airport Operations
488190	Other Support Activities for Air Transportation
488210	Support Activities for Rail Transportation
488390	Other Support Activities for Water Transportation
488490	Other Support Activities for Road Transportation
488519	Other Freight Transportation Arrangement
PROFESSIONAL, SCIENTIFIC AND TECHNICAL SERVICES	
541990	All Other Professional, Scientific and Technical Services
ADMINISTRATIVE AND SUPPORT SERVICES	
561990	All Other Support Services
EDUCATIONAL SERVICES	
	(For colleges of applied arts and technology, report SO_2, NO_x, and HFC-134A emissions from heating or cooling systems if they are equal to or greater than their respective reporting thresholds)
611210	Community Colleges and C.E.G.E.P.s (collège d'enseignement générales et professionelles)
PHOTO FINISHING SERVICES	
	(For commercial and professional photo finishing laboratories on a large scale basis)
812921	Photo Finishing Laboratories (except One-Hour)

Table 2A

Airborne Contaminants with MOE Release Based Thresholds

The following contaminants have MOE release based thresholds.

Contaminant	CAS [1]	Release Threshold (kg/yr)
CARBON DIOXIDE	124-38-9	100,000,000
CARBON MONOXIDE	630-08-0	20,000
HFC-134A	811-97-2	10
METHANE	74-82-8	5,000,000
NITROUS OXIDE	10024-97-2	2,700
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9	14,000
PM - PARTICULATE MATTER	N/A - M08	20,000
PM_{10} - PARTICULATE MATTER <=10 MICROMETERS	N/A - M09	500
$PM_{2.5}$ - PARTICULATE MATTER <=2.5 MICROMETERS	N/A - M10	300
SULPHUR DIOXIDE	7446-09-5	20,000
VOLATILE ORGANIC COMPOUNDS (VOC) [20]	N/A - M16	10,000
	Total Contaminants:	11

Table 2B

Airborne Contaminants with MOE Graded MPO[22] Thresholds

The following contaminants have MOE graded MPO thresholds.

Contaminant	CAS [1]	MPO[22] Threshold (kg/yr)
M-XYLENE	108-38-3	10,000
O-XYLENE	95-47-6	10,000
P-XYLENE	106-42-3	10,000
ACETIC ACID	64-19-7	3,000
ACETONE	67-64-1	3,000
ACETYLENE	74-86-2	3,000
BORON	7440-42-8	3,000
BORON TRIBROMIDE	10294-33-4	3,000
BORON TRICHLORIDE	10294-34-5	3,000
CALCIUM HYDROXIDE	1305-62-0	3,000
CALCIUM OXIDE	1305-78-8	3,000
DECABORANE	17702-41-9	3,000
DICAPRYL PHTHALATE	131-15-7	3,000
1,1-DICHLOROETHANE	75-34-3	3,000
DIMETHYL DISULPHIDE	624-92-0	3,000
DIMETHYL SULPHIDE	75-18-3	3,000
ETHYL ACETATE	141-78-6	3,000
ETHYL ETHER	60-29-7	3,000
FERRIC OXIDE	1309-37-1	3,000
FURFURAL	98-01-1	3,000
FURFURYL ALCOHOL	98-00-0	3,000
GLYCOL ETHERS (MISC.) [18]	N/A - M04	3,000
N-HEPTANE	142-82-5	3,000
IRON (AND ITS COMPOUNDS) [17]	7439-89-6	3,000
LITHIUM - OTHER THAN HYDRIDES	7439-93-2	3,000
MAGNESIUM OXIDE	1309-48-4	3,000
MINERAL SPIRITS GROUP #1 [19]	N/A - M06	3,000
MINERAL SPIRITS GROUP #2 [19]	N/A - M17	3,000
PENTACHLORONITROBENZENE	82-68-8	3,000
TETRAHYDROFURAN	109-99-9	3,000
TIN (AND ITS COMPOUNDS) [17]	7440-31-5	3,000
TITANIUM (AND ITS COMPOUNDS) [17]	7440-32-6	3,000
TOTAL REDUCED SULPHUR (TRS) [24]	N/A - M14	3,000
1,1,1-TRICHLOROETHANE	71-55-6	3,000
2,4,5-TRICHLOROPHENOL	95-95-4	3,000
1,2,3-TRICHLOROPROPANE	96-18-4	3,000
VINYL BROMIDE	593-60-2	3,000
VINYL FLOURIDE	75-02-5	3,000
ARSINE	7784-42-1	500
BENZIDINE	92-87-5	500
BERYLLIUM (AND ITS COMPOUNDS)	7440-41-7	500
BIS (2-CHLOROETHYL) ETHER	111-44-4	500
BIS (CHLOROMETHYL) ETHER	542-88-1	500

The following contaminants have MOE graded MPO thresholds.

Contaminant	CAS [1]	MPO[22] Threshold (kg/yr)
CARBON BLACK	1333-86-4	500
CHROMIUM (VI) COMPOUNDS	18540-29-9	500
COAL TAR PITCH VOLATILES - SOLUBLE FRACTION	8007-45-2	500
COKE OVEN EMISSIONS [21]	N/A - M02	500
DIBORANE	19287-45-7	500
1,2-DIBROMOETHANE	106-93-4	500
3,3-DICHLOROBENZIDINE	91-94-1	500
1,2-DIMETHYLHYDRAZINE	57-14-7	500
1,6-DINITROPYRENE	42397-64-8	500
1,8-DINITROPYRENE	42397-65-9	500
HEPTACHLOR	76-44-8	500
HEXACHLORO-1,3-BUTADIENE	87-68-3	500
HEXACHLOROCYCLOHEXANE	319-84-6	500
HEXAMETHYLENE DIISOCYANATE MONOMER	822-06-0	500
LITHIUM HYDRIDES	7580-67-8	500
MERCAPTANS (AS METHYL MERCAPTAN) -TOTAL	74-93-1	500
METHYLCYCLOPENTADIENYL MANGANESE TRICARBONYL (MMT)	12108-13-3	500
MINERAL SPIRITS GROUP #3 [19]	N/A - M18	500
MONOMETHYL AMINE	74-89-5	500
NICKEL CARBONYL	13463-39-3	500
N-NITROSODIETHYLAMINE	55-18-5	500
N-NITROSODIMETHYLAMINE	62-75-9	500
OCTACHLOROSTYRENE	29082-74-4	500
PARATHION	56-38-2	500
PENTABORANE	19624-22-7	500
PENTACHLOROPHENOL (PCP)	87-86-5	500
POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	500
TELLURIUM - EXCLUDING HYDROGEN TELLURIDE	13494-80-9	500
TRIBUTYLTIN	688-73-3	500
2,4,6-TRICHLOROPHENOL	88-06-2	500
METHYL MERCURY	22967-92-6	5
PAH - ACENAPHTHENE	83-32-9	5
PAH - ACENAPHTHYLENE	208-96-8	5
PAH - FLUORENE	86-73-7	5
2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	51207-31-9	0.0001
2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (TEQ)	1746-01-6	0.0001
	Total Contaminants:	79

Table 2C

Airborne Contaminants with NPRI[23] Thresholds

The following contaminants have NPRI thresholds.

Contaminant	CAS [1]	NPRI[23] Threshold (kg/yr)
ACETALDEHYDE	75-07-0	Use NPRI [23] reporting requirements for releases to air only
ACETONITRILE	75-05-8	
ACETOPHENONE	98-86-2	
ACROLEIN	107-02-8	
ACRYLAMIDE	79-06-1	
ACRYLIC ACID [2]	79-10-7	
ACRYLONITRILE	107-13-1	
ALKANES, C6-18, CHLORO	68920-70-7	
ALKANES, C10-13, CHLORO	85535-84-8	
ALLYL ALCOHOL	107-18-6	
ALLYL CHLORIDE	107-05-1	
ALUMINUM [3]	7429-90-5	
ALUMINUM OXIDE [4]	1344-28-1	
AMMONIA (TOTAL) [5]	*	
ANILINE [2]	62-53-3	
ANTHRACENE	120-12-7	
ANTIMONY [6]	*	
ARSENIC [6]	*	
ASBESTOS [7]	1332-21-4	
BENZENE	71-43-2	
BENZO(A)ANTHRACENE	56-55-3	
BENZO(A)PHENANTHRENE	218-01-9	
BENZO(A)PYRENE	50-32-8	
BENZO(B)FLUORANTHENE	205-99-2	
BENZO(E)PYRENE	192-97-2	
BENZO(G,H,I)PERYLENE	191-24-2	
BENZO(J)FLUORANTHENE	205-82-3	
BENZO(K)FLUORANTHENE	207-08-9	
BENZOYL CHLORIDE	98-88-4	
BENZOYL PEROXIDE	94-36-0	
BENZYL CHLORIDE	100-44-7	
BIPHENYL	92-52-4	
BIS(2-ETHYLHEXYL) ADIPATE	103-23-1	
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7	
BORON TRIFLUORIDE	7637-07-2	
BROMINE	7726-95-6	
1-BROMO-2-CHLOROETHANE	107-04-0	
BROMOMETHANE	74-83-9	
1,3-BUTADIENE	106-99-0	
2-BUTOXYETHANOL	111-76-2	
BUTYL ACRYLATE	141-32-2	
i-BUTYL ALCOHOL	78-83-1	

The following contaminants have NPRI thresholds.

Contaminant	CAS [1]	NPRI[23] Threshold (kg/yr)
N-BUTYL ALCOHOL	71-36-3	Use NPRI [23] reporting requirements for releases to air only
SEC-BUTYL ALCOHOL	78-92-2	
TERT-BUTYL ALCOHOL	75-65-0	
BUTYL BENZYL PHTHALATE	85-68-7	
1,2-BUTYLENE OXIDE	106-88-7	
BUTYRALDEHYDE	123-72-8	
C.I. ACID GREEN 3	4680-78-8	
C.I. BASIC GREEN 4	569-64-2	
C.I. BASIC RED 1	989-38-8	
C.I. DIRECT BLUE 218	28407-37-6	
C.I. DISPERSE YELLOW 3	2832-40-8	
C.I. FOOD RED 15	81-88-9	
C.I. SOLVENT ORANGE 7	3118-97-6	
C.I. SOLVENT YELLOW 14	842-07-9	
CADMIUM [6]	*	
CALCIUM CYANAMIDE	156-62-7	
CALCIUM FLUORIDE	7789-75-5	
CARBON DISULPHIDE	75-15-0	
CARBON TETRACHLORIDE	56-23-5	
CATECHOL	120-80-9	
CFC-11	75-69-4	
CFC-12	75-71-8	
CFC-13	75-72-9	
CFC-114	76-14-2	
CFC-115	76-15-3	
CHLORENDIC ACID	115-28-6	
CHLORINE	7782-50-5	
CHLORINE DIOXIDE	10049-04-4	
CHLOROACETIC ACID [2]	79-11-8	
CHLOROBENZENE	108-90-7	
CHLOROETHANE	75-00-3	
CHLOROFORM	67-66-3	
CHLOROMETHANE	74-87-3	
3-CHLORO-2-METHYL-1-PROPENE	563-47-3	
3-CHLOROPROPIONITRILE	542-76-7	
CHROMIUM [6]	*	
COBALT [6]	*	
COPPER [6]	*	
CRESOL [2,8]	1319-77-3	
M-CRESOL [2]	108-39-4	
O-CRESOL [2]	95-48-7	
P-CRESOL [2]	106-44-5	
CROTONALDEHYDE	4170-30-3	
CUMENE	98-82-8	
CUMENE HYDROPEROXIDE	80-15-9	
CYANIDES [9]	*	
CYCLOHEXANE	110-82-7	
CYCLOHEXANOL	108-93-0	

The following contaminants have NPRI thresholds.

Contaminant	CAS [1]	NPRI[23] Threshold (kg/yr)
DECABROMODIPHENYL OXIDE	1163-19-5	Use NPRI [23] reporting requirements for releases to air only
2,4-DIAMINOTOLUENE [2]	95-80-7	
2,6-DI-T-BUTYL-4-METHYLPHENOL	128-37-0	
DIBENZO(A,J)ACRIDINE	224-42-0	
DIBENZO(A,H)ANTHRACENE	53-70-3	
DIBENZO(A,I)PYRENE	189-55-9	
7H-DIBENZO(C,G)CARBAZOLE	194-59-2	
DIBUTYL PHTHALATE	84-74-2	
O-DICHLOROBENZENE	95-50-1	
P-DICHLOROBENZENE	106-46-7	
3,3'-DICHLOROBENZIDINE DIHYDROCHLORIDE	612-83-9	
1,2-DICHLOROETHANE	107-06-2	
DICHLOROMETHANE	75-09-2	
2,4-DICHLOROPHENOL [2]	120-83-2	
1,2-DICHLOROPROPANE	78-87-5	
DICYCLOPENTADIENE	77-73-6	
DIETHANOLAMINE [2]	111-42-2	
DIETHYL PHTHALATE	84-66-2	
DIETHYL SULPHATE	64-67-5	
DIMETHYLAMINE	124-40-3	
N,N-DIMETHYLANILINE [2]	121-69-7	
DIMETHYL PHENOL	1300-71-6	
DIMETHYL PHTHALATE	131-11-3	
DIMETHYL SULPHATE	77-78-1	
4,6-DINITRO-O-CRESOL [2]	534-52-1	
2,4-DINITROTOLUENE	121-14-2	
2,6-DINITROTOLUENE	606-20-2	
DINITROTOLUENE [8]	25321-14-6	
DI-N-OCTYL PHTHALATE	117-84-0	
1,4-DIOXANE	123-91-1	
DIPHENYLAMINE	122-39-4	
EPICHLOROHYDRIN	106-89-8	
2-ETHOXYETHANOL	110-80-5	
2-ETHOXYETHYL ACETATE	111-15-9	
ETHOXYNONYL BENZENE	28679-13-2	
ETHYL ACRYLATE	140-88-5	
ETHYLBENZENE	100-41-4	
ETHYL CHLOROFORMATE	541-41-3	
ETHYLENE	74-85-1	
ETHYLENE GLYCOL	107-21-1	
ETHYLENE OXIDE	75-21-8	
ETHYLENE THIOUREA	96-45-7	
FLUORANTHENE	206-44-0	
FLUORINE	7782-41-4	
FORMALDEHYDE	50-00-0	
FORMIC ACID	64-18-6	
HALON 1211	353-59-3	
HALON 1301	75-63-8	
HCFC-22	75-45-6	

The following contaminants have NPRI thresholds.

Contaminant	CAS [1]	NPRI[23] Threshold (kg/yr)
HCFC-122 AND ALL ISOMERS [10]	41834-16-6	Use NPRI [23] reporting requirements for releases to air only
HCFC-123 AND ALL ISOMERS [11]	34077-87-7	
HCFC 124 AND ALL ISOMERS [12]	63938-10-3	
HCFC-141B	1717-00-6	
HCFC-142B	75-68-3	
HEXACHLOROBENZENE	118-74-1	
HEXACHLOROCYCLOPENTADIENE	77-47-4	
HEXACHLOROETHANE	67-72-1	
HEXACHLOROPHENE	70-30-4	
N-HEXANE	110-54-3	
HYDRAZINE [2]	302-01-2	
HYDROCHLORIC ACID	7647-01-0	
HYDROGEN CYANIDE	74-90-8	
HYDROGEN FLUORIDE	7664-39-3	
HYDROGEN SULFIDE	7783-06-4	
HYDROQUINONE [2]	123-31-9	
INDENO(1,2,3-C,D)PYRENE	193-39-5	
IRON PENTACARBONYL	13463-40-6	
ISOBUTYRALDEHYDE	78-84-2	
ISOPHORONE DIISOCYANATE	4098-71-9	
ISOPRENE	78-79-5	
ISOPROPYL ALCOHOL	67-63-0	
P,P-ISOPROPYLIDENEDIPHENOL	80-05-7	
ISOSAFROLE	120-58-1	
LEAD [6]	*	
LITHIUM CARBONATE	554-13-2	
MALEIC ANHYDRIDE	108-31-6	
MANGANESE [6]	*	
2-MERCAPTOBENZOTHIAZOLE	149-30-4	
MERCURY [6,15]	*	
METHANOL	67-56-1	
2-METHOXYETHANOL	109-86-4	
2-METHOXYETHYL ACETATE	110-49-6	
METHYL ACRYLATE	96-33-3	
METHYL *TERT*-BUTYL ETHER	1634-04-4	
P,P-METHYLENEBIS(2-CHLOROANILINE)	101-14-4	
1,1-METHYLENE*BIS*(4-ISOCYANATOCYCLOHEXANE)	5124-30-1	
METHYLENE*BIS*(PHENYLISOCYANATE)	101-68-8	
P,P-METHYLENEDIANILINE	101-77-9	
METHYL ETHYL KETONE	78-93-3	
METHYL IODIDE	74-88-4	
METHYL ISOBUTYL KETONE	108-10-1	
METHYL METHACRYLATE	80-62-6	
N-METHYLOLACRYLAMIDE	924-42-5	
2-METHYLPYRIDINE	109-06-8	
N-METHYL-2-PYRROLIDONE	872-50-4	
MICHLER'S KETONE [2]	90-94-8	
MOLYBDENUM TRIOXIDE	1313-27-5	

The following contaminants have NPRI thresholds.

Contaminant	CAS [1]	NPRI[23] Threshold (kg/yr)
NAPHTHALENE	91-20-3	Use NPRI [23] reporting requirements for releases to air only
NICKEL [6]	*	
NITRATE ION [13]	*	
NITRIC ACID	7697-37-2	
NITRILOTRIACETIC ACID [2]	139-13-9	
P-NITROANILINE	100-01-6	
NITROBENZENE	98-95-3	
NITROGLYCERIN	55-63-0	
P-NITROPHENOL [2]	100-02-7	
2-NITROPROPANE	79-46-9	
N-NITROSODIPHENYLAMINE	86-30-6	
NONYLPHENOL	104-40-5	
NONYLPHENOL HEPTA(OXYETHYLENE) ETHANOL	27177-05-5	
NONYLPHENOL, INDUSTRIAL	84852-15-3	
NONYLPHENOL NONA(OXYETHYLENE) ETHANOL	27177-08-8	
N-NONYLPHENOL [8]	25154-52-3	
NONYLPHENOL POLYETHYLENE GLYCOL ETHER	9016-45-9	
P-NONYLPHENOL POLYETHYLENE GLYCOL ETHER	26027-38-3	
NONYLPHENOXY ETHANOL	27986-36-3	
2-(*P*-NONYLPHENOXY) ETHANOL	104-35-8	
2-(2-(*P*-NONYLPHENOXY)ETHOXY) ETHANOL	20427-84-3	
2-(2-(2-(2-(*P*-NONYLPHENOXY)ETHOXY)ETHOXY)ETHOXY) ETHANOL	7311-27-5	
4-*TERT*-OCTYLPHENOL	140-66-9	
OXIRANE, METHYL-, POLYMER WITH OXIRANE, MONO(NOYLPHENYL)ETHER	37251-69-7	
PARALDEHYDE	123-63-7	
PENTACHLOROETHANE	76-01-7	
PERYLENE	198-55-0	
PERACETIC ACID [2]	79-21-0	
PHENANTHRENE	85-01-8	
PHENOL [2]	108-95-2	
P-PHENYLENEDIAMINE [2]	106-50-3	
O-PHENYLPHENOL [2]	90-43-7	
PHOSGENE	75-44-5	
PHOSPHORIC ACID	7664-38-2	
PHOSPHORUS [14]	7723-14-0	
PHTHALIC ANHYDRIDE	85-44-9	
POLYCHLORINATED DIBENZO-P-DIOXINS & POLYCHLORINATED BIBENZOFURANS[16]	*	
POLYMERIC DIPHENYLMETHANE DIISOCYANATE	9016-87-9	
POTASSIUM BROMATE	7758-01-2	
PROPARGYL ALCOHOL	107-19-7	
PROPIONALDEHYDE	123-38-6	
PROPYLENE	115-07-1	
PROPYLENE OXIDE	75-56-9	
PYRENE	129-00-0	
PYRIDINE [2]	110-86-1	
QUINOLINE [2]	91-22-5	

The following contaminants have NPRI thresholds.

Contaminant	CAS [1]	NPRI[23] Threshold (kg/yr)
P-QUINONE	106-51-4	Use NPRI [23] reporting requirements for releases to air only
SAFROLE	94-59-7	
SELENIUM [6]	*	
SILVER [6]	*	
SODIUM FLUORIDE	7681-49-4	
SODIUM NITRITE	7632-00-0	
STYRENE	100-42-5	
STYRENE OXIDE	96-09-3	
SULPHUR HEXAFLUORIDE	2551-62-4	
SULPHURIC ACID	7664-93-9	
1,1,1,2-TETRACHLOROETHANE	630-20-6	
1,1,2,2-TETRACHLOROETHANE	79-34-5	
TETRACHLOROETHYLENE	127-18-4	
TETRACYCLINE HYDROCHLORIDE	64-75-5	
TETRAETHYL LEAD	78-00-2	
THIOUREA	62-56-6	
THORIUM DIOXIDE	1314-20-1	
TITANIUM TETRACHLORIDE	7550-45-0	
TOLUENE	108-88-3	
TOLUENE-2,4-DIISOCYANATE	584-84-9	
TOLUENE-2,6-DIISOCYANATE	91-08-7	
TOLUENEDIISOCYANATE [8]	26471-62-5	
1,2,4-TRICHLOROBENZENE	120-82-1	
1,1,2-TRICHLOROETHANE	79-00-5	
TRICHLOROETHYLENE	79-01-6	
TRIETHYLAMINE	121-44-8	
1,2,4-TRIMETHYLBENZENE	95-63-6	
2,2,4-TRIMETHYLHEXAMETHYLENE DIISOCYANATE	16938-22-0	
2,4,4-TRIMETHYLHEXAMETHYLENE DIISOCYANATE	15646-96-5	
VANADIUM [3]	7440-62-2	
VINYL ACETATE	108-05-4	
VINYL CHLORIDE	75-01-4	
VINYLIDENE CHLORIDE	75-35-4	
XYLENE [8]	1330-20-7	
ZINC [6]	*	
	Total Contaminants:	268

Notes to Tables 2A, 2B and 2C

* No single CAS number applies to this NPRI listing.

[1] CAS No. denotes the Chemical Abstracts Service Registry Number, as appropriate. MOE assigned codes denoted with "N/A - Mxx" to contaminants when no single CAS number applies to a specific contaminant.

[2] "and its salts" — The CAS number corresponds to the weak acid or base. However, the NPRI listing includes the salts of these weak acids and bases. When calculating the weight of these substances and their salts, use the molecular weight of the acid or base, not the total weight of the salt.

[3] "fume or dust"

[4] "fibrous forms"

[5] "Ammonia (total)" means the total of both of ammonia (NH_3 — CAS number 7664-41-7) and the ammonium ion (NH_4+) in solution.

[6] "and its compounds"

[7] "friable form"

[8] "mixed isomers"

[9] "ionic"

[10] The isomers include, but are not necessarily limited to, HCFC-122 (CAS Number 354-21-2).

[11] The isomers include, but are not necessarily limited to, HCFC-123 (CAS Number 306-83-2) and HCFC 123a (CAS Number 90454-18-5).

[12] The isomers include, but are not necessarily limited to, HCFC 124 (CAS Number 2837-89-0) and HCFC 124a (CAS Number 354-25-6).

[13] "in solution at a pH of 6.0 or greater"

[14] "yellow or white"

[15] The reporting requirements for mercury have changed for the 2000 reporting year.

[16] This class of substances is restricted to the following congeners: 2,3,7,8-Tetrachlorodibenzo-p-dioxin (1746-01-6); 1,2,3,7,8-Pentachlorodibenzo-p-dioxin (40321-76-4); 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (39227-28-6); 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (19408-74-3); 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (57653-85-7); 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (35822-46-9); Octachlorodibenzo-p-dioxin (326-87-9); 2,3,7,8-Tetrachlorodibenzofuran (51207-31-9); 2,3,4,7,8-Pentachlrordibenzofuran (57117-31-4); 1,2,3,7,8-Pentachlorodibenzofuran (57117-41-6); 1,2,3,4,7,8-Hexachlorodibenzofuran (70648-26-9); 1,2,3,7,8,9-Hexachlorodibenzofuran (72918-21-9); 1,2,3,6,7,8-Hexachlorodibenzofuran (57117-44-9); 2,3,4,6,7,8-Hexachlorodibenzofuran (60851-34-5); 1,2,3,4,6,7,8-Heptachlorodibenzofuran (67562-39-4); 1,2,3,4,7,8,9-Heptachlorodibenzofuran (55673-89-7); and Octachlorodibenzofuran (39001-02-0).

[17] Refers to the metal portion of the compounds emitted to the atmosphere. Reporting facilities are only required to report PM, PM_{10}, and $PM_{2.5}$ components of fugitive dust emissions from storage piles, road dust, landfill sites, quarries and mine tailings.

[18] Refer to Annex 1 to Tables 2A, B and C for contaminants listed under glycol ethers (misc.). If one contaminant is equal to or greater than the threshold, then all contaminants in the group must be reported.

[19] Refer to Annex 2 to Tables 2A, B and C for definitions of three mineral spirits groups and the associated contaminants. If one contaminant in the group is equal to or greater than the threshold, then all contaminants in that group must be reported.

[20] Refer to Annex 3 to Tables 2A, B and C for the definition of VOC.

[21] "Coke oven emissions" means the emissions discharged to the atmosphere in the operation of coke oven batteries. Emissions will occur at charging, pushing or quenching operation, bypass, bleeder, and from coke oven doors. Organic compounds soluble in benzene are the major constituents of PM emissions and are also included as VOC. Among the toxic air pollutants included in the organic emissions are benzene, toluene, xylenes, cyanide compounds, naphthalene, phenol, and Polycyclic Organic Matters (POM), all of which are contained in coke oven emissions[3].

Notes to Tables 2A, 2B and 2C

FIRE[2] has emission factors for coke oven emissions for pushing operation, oven door leaks and topside leaks.

[22] MPO means manufactured, processed or otherwise used. By-products must be included in the calculation of the MPO reporting threshold (tonnes or kilograms), even if they are at a concentration of less than one percent by weight. A facility must report its air emissions if contaminants are equal to or greater than the MPO thresholds and the facility has employees that worked a total of 20,000 hours or more (which is equivalent to 10 full-time employees) during the reporting year.

[23] National Pollutant Release Inventory, Environment Canada. Reporting requirements and thresholds as gazetted for the reporting year (also refer to NPRI[16] reporting guidelines for details). Record keeping requirements will be the same as in Table 7.

[24] Total reduced sulphur (TRS) consists of hydrogen sulphide (H_2S), dimethyl sulphide [$(CH_3)_2S$], dimethyl disulphide [$(CH_3)_2S_2$] and methyl mercaptan (CH_3SH).

Annex 1 to Tables 2A, 2B and 2C

Contaminants Listed under Glycol Ethers

Contaminant	Abbreviation	CAS
ETHYLENE GLYCOL BUTYL ETHER	EGBE	111-76-2
ETHYLENE GLYCOL BUTYL ETHER	EGBEA	112-07-2
DIETHYLENE GLYCOL BUTYL ETHER	DEGBE	112-34-5
DIETHYLENE GLYCOL BUTYL ETHER	DEBBEA	124-17-4
DIETHYLENE GLYCOL METHYL ETHER	DEGME	111-77-3
DIETHYLENE GLYCOL METHYL ETHER	DEGMEA	629-38-9
DIETHYLENE GLYCOL ETHYL ETHER	DEGEE	111-90-0
DIETHYLENE GLYCOL ETHYL ETHER	DEGEEA	112-15-2
ETHYLENE GLYCOL PROPYL ETHER	EGPE	2807-30-9
ETHYLENE GLYCOL HEXYL ETHER	EGHE	112-25-4
1-METHOXY-2-PROPANOL	PGME	107-98-2
PROPYLENE GLYCOL METHYL ETHER	PGMEA	108-65-6
PROPYLENE GLYCOL PROPYL ETHER	PGPE	1569-01-3
PROPYLENE GLYCOL BUTYL ETHER	PGBE	5131-66-8
PROPYLENE GLYCOL ETHYL ETHER	PGEE	1569-02-4
DIPROPYLENE GLYCOL METHYL ETHER	DPGME	34590-34-8
2-METHOXY-1-PROPANOL	PGME	1589-47-5
ETHYLENE GLYCOL PHENYL ETHER	EGPhE	122-99-6

Annex 2 to Tables 2A, 2B and 2C

Definition of Three Mineral Spirits Groups and the Associated Contaminants

MINERAL SPIRITS GROUP #1

Contaminant	CAS
HEAVY ALKYLATE NAPHTHA	64741-65-7
HEAVY NAPHTHA	68551-17-7
HYDROTREATED HEAVY NAPHTHA	64742-48-9
MINERAL SPIRITS	64475-85-0
NAPHTHA	8030-30-6
NAPHTHA HEAVY STRAIGHT RUN	64741-41-9
NAPHTHA, FULL RANGE ALKYLATE	64741-64-6
SOLVENT NAPHTHA LIGHT ALIPHATIC	64742-89-8
SOLVENT NAPHTHA MEDIUM ALIPHATIC	64742-88-7
VM & P NAPHTHA	8032-32-4
STODDARD SOLVENT	8052-41-3

MINERAL SPIRITS GROUP #2

Contaminant	CAS
HEAVY AROMATIC SOLVENT NAPHTHA	64742-94-5
HYDRODESULPHURIZED MIDDLE Distillate	64742-80-9
HYDROTREATED HEAVY NAPHTHENIC Distillate	64742-52-5
HYDROTREATED LIGHT DISTILLATE	64742-47-8
HYDROTREATED MIDDLE DISTILLATE	64742-46-7
LIGHT AROMATIC SOLVENT NAPHTHA	64742-95-6
PETROLEUM DISTILLATES, ACID TREATED	64742-14-9
SWEETENED MIDDLE DISTILLATE	64741-86-2

MINERAL SPIRITS GROUP #3

Contaminant	CAS
HYDROTREATED HEAVY PARAFFINIC MINERAL SPIRITS	64742-54-7
HYDROTREATED LIGHT NAPHTHENIC DISTILLATE	64742-53-6
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8
MINERAL OIL	8012-95-1
SOLVENT REFINED HEAVY PARAFFINIC DISTILLATE	64741-88-4
WHITE MINERAL OIL	8042-47-5

Annex 3 to Tables 2A, 2B and 2C

Definition of Volatile Organic Compounds

For the purposes of this Guideline, volatile organic compounds (VOCs) are defined as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions and has a vapour pressure of 0.01 kPa or greater at 25°C [21, 22].

The following compounds are not included as VOC because of their negligible photochemical reactivity [22]:

methane;
ethane;
methylene chloride (dichloromethane);
1,1,1-trichloroethane (methyl chloroform);
1,1,2-trichloro-1,2,2- trifluoroethane (CFC-113);
trichlorofluoromethane (CFC-11);
dichlorodifluoromethane (CFC-12);
chlorodifluoromethane (HCFC-22);
trifluoromethane (HFC-23);
1,2- dichloro 1,1,2,2-tetrafluoroethane (CFC-114);
chloropentafluoroethane (CFC-115);
1,1,1-trifluoro 2,2-dichloroethane (HCFC-123);
1,1,1,2- tetrafluoroethane (HFC-134a);
1,1-dichloro 1-fluoroethane (HCFC-141b);
1-chloro 1,1-difluoroethane (HCFC-142b);
2-chloro-1,1,1,2- tetrafluoroethane (HCFC-124);
pentafluoroethane (HFC-125);
1,1,2,2- tetrafluoroethane (HFC-134);
1,1,1-trifluoroethane (HFC-143a);
1,1- difluoroethane (HFC-152a);
parachlorobenzotrifluoride (PCBTF);
cyclic, branched, or linear completely methylated siloxanes;
acetone;
perchloroethylene (tetrachloroethylene);
3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca);
1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb);
1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC 43-10mee);
difluoromethane (HFC-32);
ethylfluoride (HFC-161);
1,1,1,3,3,3-hexafluoropropane (HFC-236fa);
1,1,2,2,3-pentafluoropropane (HFC-245ca);
1,1,2,3,3-pentafluoropropane (HFC-245ea);
1,1,1,2,3-pentafluoropropane (HFC-245eb);
1,1,1,3,3-pentafluoropropane (HFC-245fa);

1,1,1,2,3,3-hexafluoropropane (HFC-236ea);
1,1,1,3,3-pentafluorobutane (HFC-365mfc);
chlorofluoromethane (HCFC-31);
1-chloro-1-fluoroethane (HCFC-151a);
1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a);
1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane ($C_4F_9OCH_3$);
2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane ($(CF_3)_2CFCF_2OCH_3$);
1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane ($C_4F_9OC_2H_5$);
2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane ($(CF_3)_2CFCF_2OC_2H_5$);
methyl acetate and perfluorocarbon compounds which falls into these classes:

(i) Cyclic, branched, or linear, completely fluorinated alkanes;
(ii) Cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;
(iii) Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and
(iv) Sulphur containing perfluorocarbons with no unsaturations and with sulphur bonds only to carbon and fluorine.

Owing to the numerous VOC species, it is not possible to give an all inclusive list of atmospherically important VOCs. A list of VOC compounds based on Carter's [23] list of ozone forming potential contaminants, not including those in the aforementioned USEPA exclusion list, is available from the Ministry of the Environment's Public Information Centre upon request or by ***clicking here.***

Table 3

Criteria for Applicability to the Facility by Sector for Reporting of Criteria Air Contaminants and Greenhouse Gases

If your facility belongs to one of the following NAICS and if one or more of the following criteria are met, calculating and reporting of emissions of contaminants listed in Table 2A of the Guideline is required.

SECTOR DESCRIPTION WITH NAICS* CODES	CRITERIA FOR APPLICABILITY OF THE REGULATION				
	>3 MM BTU/hr**	≥ 3,000 kg/year solvents ***	≥ 3,000 kg/year coating materials****	≥ 3,000 kg/year printing inks	≥ 5,000 kg/year welding rods or wires
CLASS A - ELECTRICITY GENERATION					
ELECTRIC POWER GENERATION					
221111 Hydro-Electric Power Generation	NA				
221112 Fossil-Fuel Electric Power Generation	NA				
221113 Nuclear Electric Power Generation	NA				
221119 Other Electric Power Generation	NA				
CLASS B - LARGE SOURCES					
METAL ORE MINING					
212210 Iron Ore Mining	✓	✓			
212220 Gold and Silver Ore Mining	✓	✓			
212231 Lead-Zinc Ore Mining	✓	✓			
212232 Nickel-Copper Ore Mining	✓	✓			
212233 Copper-Zinc Ore Mining	✓	✓			
212291 Uranium Ore Mining	✓	✓			
212299 All Other Metal Ore Mining	✓	✓			
NON-METALLIC MINERALS MINING AND QUARRYING					
212314 Granite Mining and Quarrying	✓	✓			
212315 Limestone Mining and Quarrying	✓	✓			
212316 Marble Mining and Quarrying	✓	✓			
212317 Sandstone Mining and Quarrying	✓	✓			
212323 Sand and Gravel Mining and Quarrying	✓	✓			
212326 Shale, Clay and Refractory Mining and Quarrying	✓	✓			
212394 Asbestos Mining	✓	✓			
212395 Gypsum Mining	✓	✓			
212396 Potash Mining	✓	✓			
NATURAL GAS DISTRIBUTION					
221210 Natural Gas Distribution	✓				
WATER, SEWAGE AND OTHER SYSTEMS					
221330 Steam and Air-Conditioning Supply	✓				
TEXTILE MILLS AND TEXTILE MILL PRODUCTS					
313110 Fibre, Yarn and Thread Mills	✓	✓			
313210 Broad-Woven Fabric Mills	✓	✓			
313310 Textile and Fabric Finishing	✓	✓			
313320 Fabric Coating	✓	✓			
314110 Carpet and Rug Mills	✓	✓			
WOOD PRODUCT MANUFACTURING					
321111 Sawmills (except Shingle and Shake Mills)	✓	✓			

NA Not applicable. The facility must proceed to calculate and report emissions of contaminants against thresholds.

* NAICS - North American Industry Classification System, Canada, Statistics Canada 1997.

** See Section 2.2(2) of the Guideline.

*** The term "solvent" is described in the Glossary section of the Guideline.

**** The term "coating material" is described in the Glossary section of the Guideline.

✓ Criteria applicable to the respective sectors.

SECTOR DESCRIPTION WITH NAICS* CODES	CRITERIA FOR APPLICABILITY OF THE REGULATION				
	>3 MM BTU/hr**	≥ 3,000 kg/year solvents***	≥ 3,000 kg/year coating materials****	≥ 3,000 kg/year printing inks	≥ 5,000 kg/year welding rods or wires
321112 Shingle and Shake Mills	✓	✓			
321114 Wood Preservation	✓	✓			
321211 Hardwood Veneer and Plywood Mills	✓	✓	✓		
321212 Softwood Veneer and Plywood Mills	✓	✓	✓		
321215 Structural Wood Product Manufacturing	✓	✓	✓		
321216 Particle Board and Fibreboard Mills	✓	✓	✓		
321217 Waferboard Mills	✓	✓	✓		
321911 Wood Window and Door Manufacturing	✓	✓	✓		
PULP, PAPER AND PAPERBOARD MILLS					
322111 Mechanical Pulp Mills	✓	✓			
322112 Chemical Pulp Mills	✓	✓			
322121 Paper (except Newsprint) Mills	✓	✓			
322122 Newsprint Mills	✓	✓			
322130 Paperboard Mills	✓	✓			
CONVERTED PAPER PRODUCT MANUFACTURING					
322211 Corrugated and Solid Fibre Box Manufacturing	✓	✓		✓	
322212 Folding Paperboard Box Manufacturing	✓	✓		✓	
322219 Other Paperboard Container Manufacturing	✓	✓		✓	
322220 Paper Bag and Coated and Treated Paper Manufacturing	✓	✓		✓	
322230 Stationery Product Manufacturing	✓	✓		✓	
322291 Sanitary Paper Product Manufacturing	✓	✓		✓	
PRINTING AND RELATED SUPPORT ACTIVITIES					
323113 Commercial Screen Printing	✓	✓		✓	
323116 Manifold Business Forms Printing	✓	✓		✓	
323119 Other Printing (Includes Commercial Lithographic, Gravure and Flexographic Printing)	✓	✓		✓	
PETROLEUM REFINING AND DISTRIBUTION					
324110 Petroleum Refineries	✓	✓			
412110 Petroleum Product Wholesaler-Distributors (For gasoline bulk plants and terminals only)	NA				
ASPHALT, OTHER PETROLEUM AND COAL PRODUCTS					
324121 Asphalt Paving Mixture and Block Manufacturing	✓	✓			
324122 Asphalt Shingle and Coating Material Manufacturing	✓	✓			
324190 Other Petroleum and Coal Products Manufacturing	✓	✓			
CHEMICAL MANUFACTURING					
325110 Petrochemical Manufacturing	✓	✓			
325120 Industrial Gas Manufacturing	✓	✓			
325130 Synthetic Dye and Pigment Manufacturing	✓	✓			
325181 Alkali and Chlorine Manufacturing	✓	✓			
325189 All Other Basic Inorganic Chemical Manufacturing	✓	✓			
325190 Other Basic Organic Chemical Manufacturing	✓	✓			
325210 Resin and Synthetic Rubber Manufacturing	✓	✓			

NA	Not applicable. The facility must proceed to calculate and report emissions of contaminants against thresholds.
*	NAICS - North American Industry Classification System, Canada, Statistics Canada 1997.
**	See Section 2.2(2) of the Guideline.
***	The term "solvent" is described in the Glossary section of the Guideline.
****	The term "coating material" is described in the Glossary section of the Guideline.
✓	Criteria applicable to the respective sectors.

SECTOR DESCRIPTION WITH NAICS* CODES	CRITERIA FOR APPLICABILITY OF THE REGULATION				
	>3 MM BTU/hr**	≥ 3,000 kg/year solvents ***	≥ 3,000 kg/year coating materials****	≥ 3,000 kg/year printing inks	≥ 5,000 kg/year welding rods or wires
325220 Artificial and Synthetic Fibres and Filaments Manufacturing	✓	✓			
325313 Chemical Fertilizer (except Potash) Manufacturing	✓	✓			
325314 Mixed Fertilizer Manufacturing	✓	✓			
325320 Pesticide and Other Agricultural Chemical Manufacturing	✓	✓			
325410 Pharmaceutical and Medicine Manufacturing	✓	✓			
325510 Paint and Coating Manufacturing	✓	✓	✓		
325520 Adhesive Manufacturing	✓	✓			
325610 Soap and Cleaning Compound Manufacturing	✓	✓			
325620 Toilet Preparation Manufacturing	✓	✓			
325910 Printing Ink Manufacturing	✓	✓		✓	
325920 Explosives Manufacturing	✓	✓			
325991 Custom Compounding of Purchased Resins	✓	✓			
325999 All Other Miscellaneous Chemical Product Manufacturing	✓	✓			
PLASTICS AND RUBBER PRODUCTS MANUFACTURING					
326111 Unsupported Plastic Bag Manufacturing	✓	✓		✓	
326114 Unsupported Plastic Film and Sheet Manufacturing	✓	✓			
326121 Unsupported Plastic Profile Shape Manufacturing	✓	✓			
326122 Plastic Pipe and Pipe Fitting Manufacturing	✓	✓			
326130 Laminated Plastic Plate, Sheet and Shape Manufacturing	✓	✓			
326140 Polystyrene Foam Product Manufacturing	✓	✓			
326150 Urethane and Other Foam Product (except Polystyrene) Manufacturing	✓	✓			
326160 Plastic Bottle Manufacturing	✓	✓			
326191 Plastic Plumbing Fixture Manufacturing	✓	✓			
326193 Motor Vehicle Plastic Parts Manufacturing	✓	✓			
326210 Tire Manufacturing	✓	✓			
326220 Rubber and Plastic Hose and Belting Manufacturing	✓	✓			
NON-METALLIC MINERAL PRODUCT MANUFACTURING					
327110 Pottery, Ceramics and Plumbing Fixture Manufacturing	✓	✓			
327120 Clay Building Material and Refractory Manufacturing	✓	✓			
327214 Glass Manufacturing	✓	✓			
327215 Glass Product Manufacturing from Purchased Glass	✓	✓			
327310 Cement Manufacturing	✓	✓			
327320 Ready-Mix Concrete Manufacturing	✓	✓			
327330 Concrete Pipe, Brick and Block Manufacturing	✓	✓			✓
327410 Lime Manufacturing	✓	✓			
327420 Gypsum Product Manufacturing	✓	✓			
327910 Abrasive Product Manufacturing	✓	✓			
IRON AND STEEL MILLS AND FERRO-ALLOY MANUFACTURING					
331110 Iron and Steel Mills and Ferro-Alloy Manufacturing	✓	✓	✓		
STEEL PRODUCT MANUFACTURING FROM PURCHASED STEEL					
331210 Iron and Steel Pipes and Tubes Manufacturing	✓	✓	✓		✓
331221 Cold-Rolled Steel Shape Manufacturing	✓	✓	✓		
331222 Steel Wire Drawing	✓	✓	✓		

NA	Not applicable. The facility must proceed to calculate and report emissions of contaminants against thresholds.
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**	See Section 2.2(2) of the Guideline.
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****	The term "coating material" is described in the Glossary section of the Guideline.
✓	Criteria applicable to the respective sectors.

SECTOR DESCRIPTION WITH NAICS* CODES		CRITERIA FOR APPLICABILITY OF THE REGULATION				
		>3 MM BTU/hr**	≥ 3,000 kg/year solvents ***	≥ 3,000 kg/year coating materials****	≥ 3,000 kg/year printing inks	≥ 5,000 kg/year welding rods or wires
ALUMINA AND ALUMINUM PRODUCTION AND PROCESSING						
331313	Primary Production of Alumina and Aluminum	✓	✓	✓		
331317	Aluminum Rolling, Drawing, Extruding and Alloying	✓	✓	✓		
NON-FERROUS METAL (EXCEPT ALUMINUM) PRODUCTION AND PROCESSING						
331410	Non-Ferrous (except Aluminum) Smelting and Refining	✓	✓	✓		
331420	Copper Rolling, Drawing, Extruding and Alloying	✓	✓	✓		
331490	Non-Ferrous (except Copper and Aluminum) Rolling, Drawing, Extruding and Alloying	✓	✓	✓		
FOUNDRIES						
331511	Iron Foundries	✓	✓	✓		
331514	Steel Foundries	✓	✓	✓		
331523	Non-Ferrous Die-Casting Foundries	✓	✓	✓		
331529	Non-Ferrous Foundries (except Die-Casting)	✓	✓	✓		
FABRICATED METAL PRODUCT MANUFACTURING						
332113	Forging	✓	✓			
332118	Stamping	✓	✓			
332210	Cutlery and Hand Tool Manufacturing	✓	✓	✓		✓
332311	Prefabricated Metal Building and Component Manufacturing	✓	✓	✓		✓
332314	Concrete Reinforcing Bar Manufacturing	✓	✓			✓
332319	Other Plate Work and Structural Product Manufacturing	✓	✓			✓
332321	Metal Window and Door Manufacturing	✓	✓	✓		✓
332410	Power Boiler and Heat Exchanger Manufacturing	✓	✓			✓
332420	Metal Tank (Heavy Gauge) Manufacturing	✓	✓	✓		✓
332431	Metal Can Manufacturing	✓	✓	✓		✓
332510	Hardware Manufacturing	✓	✓	✓		
332611	Spring (Heavy Gauge) Manufacturing	✓	✓			
332619	Other Fabricated Wire Product Manufacturing	✓	✓			
332720	Turned Product and Screw, Nut and Bolt Manufacturing	✓	✓			
332810	Coating, Engraving, Heat Treating and Allied Activities	✓	✓	✓		
332910	Metal Valve Manufacturing	✓	✓			
332991	Ball and Roller Bearing Manufacturing	✓	✓			
COMPUTER AND ELECTRONIC PRODUCT MANUFACTURING						
334110	Computer and Peripheral Equipment Manufacturing	✓	✓	✓		
334210	Telephone Apparatus Manufacturing	✓	✓	✓		
334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	✓	✓	✓		
334290	Other Communications Equipment Manufacturing	✓	✓	✓		
334410	Semiconductor and Other Electronic Component Manufacturing	✓	✓	✓		
334511	Navigational and Guidance Instruments Manufacturing	✓	✓	✓		

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SECTOR DESCRIPTION WITH NAICS* CODES		CRITERIA FOR APPLICABILITY OF THE REGULATION				
		>3 MM BTU/hr**	≥ 3,000 kg/year solvents ***	≥ 3,000 kg/year coating materials****	≥ 3,000 kg/year printing inks	≥ 5,000 kg/year welding rods or wires
334512	Measuring, Medical and Controlling Devices Manufacturing	✓	✓	✓		
335110	Electric Lamp Bulb and Parts Manufacturing	✓	✓	✓		
335120	Lighting Fixture Manufacturing	✓	✓	✓		
335210	Small Electrical Appliance Manufacturing	✓	✓	✓		
335223	Major Kitchen Appliance Manufacturing	✓	✓	✓		
335311	Power, Distribution and Specialty Transformers Manufacturing	✓	✓	✓		
335312	Motor and Generator Manufacturing	✓	✓	✓		
335315	Switchgear and Switchboard, and Relay and Industrial Control Apparatus Manufacturing	✓	✓	✓		
335910	Battery Manufacturing	✓	✓	✓		
335920	Communication and Energy Wire and Cable Manufacturing	✓	✓	✓		
335930	Wiring Device Manufacturing	✓	✓	✓		
TRANSPORTATION EQUIPMENT MANUFACTURING						
336110	Automobile and Light-Duty Motor Vehicle Manufacturing	✓	✓	✓		✓
336120	Heavy-Duty Truck Manufacturing	✓	✓	✓		✓
336211	Motor Vehicle Body Manufacturing	✓	✓	✓		✓
336212	Truck Trailer Manufacturing	✓	✓	✓		✓
336215	Motor Home, Travel Trailer and Camper Manufacturing	✓	✓	✓		✓
336310	Motor Vehicle Gasoline Engine and Engine Parts Manufacturing	✓	✓	✓		✓
336320	Motor Vehicle Electrical and Electronic Equipment Manufacturing	✓	✓	✓		✓
336330	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing	✓	✓	✓		✓
336340	Motor Vehicle Brake System Manufacturing	✓	✓	✓		✓
336350	Motor Vehicle Transmission and Power Train Parts Manufacturing	✓	✓	✓		✓
336360	Motor Vehicle Seating and Interior Trim Manufacturing	✓	✓	✓		✓
336370	Motor Vehicle Metal Stamping	✓	✓	✓		✓
336390	Other Motor Vehicle Parts Manufacturing	✓	✓	✓		✓
336410	Aerospace Product and Parts Manufacturing	✓	✓	✓		✓
336510	Railroad Rolling Stock Manufacturing	✓	✓	✓		
336611	Ship Building and Repairing	✓	✓	✓		✓
336612	Boat Building	✓	✓	✓		✓
336990	Other Transportation Equipment Manufacturing	✓	✓	✓		✓
CLASS C - SMALL SOURCES						
WATER, SEWAGE AND OTHER SYSTEMS						
221320	Sewage Treatment Facilities	✓				
FOOD AND KINDRED PRODUCTS (FOR ANIMAL CONSUMPTION)						
311111	Dog and Cat Food Manufacturing	✓	✓			

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✓ Criteria applicable to the respective sectors.

SECTOR DESCRIPTION WITH NAICS* CODES	CRITERIA FOR APPLICABILITY OF THE REGULATION				
	>3 MM BTU/hr**	≥ 3,000 kg/year solvents***	≥ 3,000 kg/year coating materials****	≥ 3,000 kg/year printing inks	≥ 5,000 kg/year welding rods or wires
311119 Other Animal Food Manufacturing	✓	✓			
FOOD AND KINDRED PRODUCTS (FOR HUMAN CONSUMPTION)					
311211 Flour Milling	✓	✓			
311214 Rice Milling and Malt Manufacturing	✓	✓			
311221 Wet Corn Milling	✓	✓			
311224 Oilseed Processing	✓	✓			
311225 Fat and Oil Refining and Blending	✓	✓			
311230 Breakfast Cereal Manufacturing	✓	✓			
311310 Sugar Manufacturing	✓	✓			
311320 Chocolate and Confectionery Manufacturing from Cacao Beans	✓	✓			
311330 Confectionery Manufacturing from Purchased Chocolate	✓	✓			
311340 Non-Chocolate Confectionery Manufacturing	✓	✓			
311410 Frozen Food Manufacturing	✓	✓			
311420 Fruit and Vegetable Canning, Pickling and Drying	✓	✓			
311511 Fluid Milk Manufacturing	✓	✓			
311515 Butter, Cheese, and Dry and Condensed Dairy Products Manufacturing	✓	✓			
311520 Ice Cream and Frozen Dessert Manufacturing	✓	✓			
311614 Rendering and Meat Processing from Carcasses	✓	✓			
311615 Poultry Processing	✓	✓			
311710 Seafood Product Preparation and Packaging	✓	✓			
311814 Commercial Bakeries and Frozen Product Manufacturing	✓	✓			
311821 Cookie and Cracker Manufacturing	✓	✓			
311822 Flour Mixes and Dough Manufacturing from Purchased Flour	✓	✓			
311823 Dry Pasta Manufacturing	✓	✓			
311830 Tortilla Manufacturing	✓	✓			
311911 Roasted Nut and Peanut Butter Manufacturing	✓	✓			
311919 Other Snack Food Manufacturing	✓	✓			
311920 Coffee and Tea Manufacturing	✓	✓			
311930 Flavouring Syrup and Concentrate Manufacturing	✓	✓			
311940 Seasoning and Dressing Manufacturing	✓	✓			
312110 Soft Drink and Ice Manufacturing	✓	✓			
312120 Breweries	✓	✓			
312130 Wineries	✓	✓			
312140 Distilleries	✓	✓			
TOBACCO MANUFACTURING					
312210 Tobacco Stemming and Redrying	✓	✓			
312220 Tobacco Product Manufacturing	✓	✓			
LEATHER AND ALLIED PRODUCT MANUFACTURING					
316110 Leather and Hide Tanning and Finishing	✓	✓	✓		

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SECTOR DESCRIPTION WITH NAICS* CODES		CRITERIA FOR APPLICABILITY OF THE REGULATION				
		>3 MM BTU/hr**	≥ 3,000 kg/year solvents***	≥ 3,000 kg/year coating materials****	≥ 3,000 kg/year printing inks	≥ 5,000 kg/year welding rods or wires
316210	Footwear Manufacturing	✓	✓			
316990	Other Leather and Allied Product Manufacturing	✓	✓	✓		
MACHINERY MANUFACTURING						
333110	Agricultural Implement Manufacturing	✓	✓	✓		✓
333120	Construction Machinery Manufacturing	✓	✓	✓		✓
333130	Mining and Oil and Gas Field Machinery Manufacturing	✓	✓	✓		✓
333210	Sawmill and Woodworking Machinery Manufacturing	✓	✓	✓		✓
333220	Rubber and Plastics Industry Machinery Manufacturing	✓	✓	✓		✓
333291	Paper Industry Machinery Manufacturing	✓	✓	✓		✓
333310	Commercial and Service Industry Machinery Manufacturing	✓	✓	✓		✓
333413	Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing	✓	✓	✓		✓
333416	Heating Equipment and Commercial Refrigeration Equipment Manufacturing	✓	✓	✓		✓
333511	Industrial Mould Manufacturing	✓	✓	✓		✓
333519	Other Metalworking Machinery Manufacturing	✓	✓	✓		✓
333611	Turbine and Turbine Generator Set Unit Manufacturing	✓	✓	✓		✓
333619	Other Engine and Power Transmission Equipment Manufacturing	✓	✓	✓		✓
333910	Pump and Compressor Manufacturing	✓	✓	✓		✓
333920	Material Handling Equipment Manufacturing	✓	✓	✓		✓
FURNITURE AND RELATED PRODUCT MANUFACTURING						
337110	Wood Kitchen Cabinet and Counter Top Manufacturing	✓	✓	✓		
337121	Upholstered Household Furniture Manufacturing	✓	✓	✓		
337123	Other Wood Household Furniture Manufacturing	✓	✓	✓		
337126	Household Furniture (except Wood and Upholstered) Manufacturing	✓	✓	✓		✓
337127	Institutional Furniture Manufacturing	✓	✓	✓		✓
337213	Wood Office Furniture, including Custom Architectural Woodwork, Manufacturing	✓	✓	✓		
337214	Office Furniture (except Wood) Manufacturing	✓	✓	✓		✓
337215	Showcase, Partition, Shelving and Locker Manufacturing	✓	✓	✓		✓
337910	Mattress Manufacturing	✓	✓	✓		
337920	Blind and Shade Manufacturing	✓	✓	✓		
TRANSPORTATION OPERATION (For maintenance and repair yard only)						
485110	Urban Transit Systems	✓	✓			
485210	Interurban and Rural Bus Transportation	✓	✓			

NA Not applicable. The facility must proceed to calculate and report emissions of contaminants against thresholds.
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✓ Criteria applicable to the respective sectors.

SECTOR DESCRIPTION WITH NAICS* CODES	CRITERIA FOR APPLICABILITY OF THE REGULATION				
	>3 MM BTU/hr**	≥ 3,000 kg/year solvents ***	≥ 3,000 kg/year coating materials****	≥ 3,000 kg/year printing inks	≥ 5,000 kg/year welding rods or wires
COMMERCIAL BUILDINGS *(Commercial buildings include office buildings, hotels, shopping centres. Report SO_2, NO_x, and HFC-134A emissions from heating or cooling systems if the emissions are equal to or greater than their respective reporting thresholds)*					
531120 Lessors (or Owners) of Non-Residential Buildings (except Mini-Warehouses)	✓	✓			
TESTING LABORATORIES *(For product development and testing only)*					
541380 Testing Laboratories	✓	✓			
WASTE MANAGEMENT AND REMEDIATION SERVICES					
562110 Waste Collection	✓	✓			
562210 Waste Treatment and Disposal	NA				
562910 Remediation Services	✓	✓			
562920 Material Recovery Facilities	✓	✓			
562990 All Other Waste Management Services	✓	✓			
EDUCATIONAL SERVICES *(For universities, report SO_2, NO_x, and HFC-134A emissions from heating or cooling systems if the emissions are equal to or greater than their respective reporting thresholds)*					
611310 Universities	✓	✓		✓	
HEALTH CARE (For hospitals with incinerators only)					
622111 General (except Paediatric) Hospitals	NA				
622112 Paediatric Hospitals	NA				
622210 Psychiatric and Substance Abuse Hospitals	NA				
622310 Specialty (except Psychiatric and Substance Abuse) Hospitals	NA				
AUTO REPAIR SERVICES					
811121 Automotive Body, Paint and Interior Repair and Maintenance	✓	✓	✓		✓
DRY CLEANING AND LAUNDRY SERVICES *(For bulk dry cleaning depots/plants only)*					
812320 Dry Cleaning and Laundry Services (except Coin-Operated)	✓	✓			
CLASS C - SMALL SOURCES MISCELLANEOUS					
OIL AND GAS EXTRACTION					
211113 Conventional Oil and Gas Extraction	✓	✓			
211114 Non-Conventional Oil Extraction	✓	✓			
COAL MINING					
212114 Bituminous Coal Mining	✓	✓			
212115 Subbituminous Coal Mining	✓	✓			
212116 Lignite Coal Mining	✓	✓			

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SECTOR DESCRIPTION WITH NAICS* CODES	CRITERIA FOR APPLICABILITY OF THE REGULATION				
	>3 MM BTU/hr**	≥ 3,000 kg/year solvents***	≥ 3,000 kg/year coating materials****	≥ 3,000 kg/year printing inks	≥ 5,000 kg/year welding rods or wires
NON-METALLIC MINERALS MINING AND QUARRYING					
212392 Diamond Mining	✓	✓			
212393 Salt Mining	✓	✓			
212397 Peat Extraction	✓	✓			
212398 All Other Non-Metallic Mineral Mining and Quarrying	✓	✓			
SUPPORT ACTIVITIES FOR MINING AND OIL AND GAS EXTRACTION					
213111 Oil and Gas Contract Drilling	✓	✓			
213117 Contract Drilling (except Oil and Gas)	✓	✓			
213118 Services to Oil and Gas Extraction	✓	✓			
213119 Other Support Activities for Mining	✓	✓			
ELECTRIC POWER TRANSMISSION AND DISTRIBUTION					
221121 Electric Bulk Power Transmission and Control	NA				
221122 Electric Power Distribution	NA				
FOOD AND KINDRED PRODUCTS (FOR HUMAN CONSUMPTION)					
311611 Animal (except Poultry) Slaughtering	✓	✓			
311990 All Other Food Manufacturing	✓	✓			
TEXTILE MILLS AND TEXTILE MILL PRODUCTS					
313220 Narrow Fabric Mills and Schiffli Machine Embroidery	✓	✓			
313230 Nonwoven Fabric Mills	✓	✓			
313240 Knit Fabric Mills	✓	✓			
314120 Curtain and Linen Mills	✓	✓			
314910 Textile Bag and Canvas Mills	✓	✓			
314990 All Other Textile Product Mills	✓	✓			
CLOTHING MANUFACTURING					
315110 Hosiery and Sock Mills	✓	✓			
315190 Other Clothing Knitting Mills	✓	✓			
315210 Cut and Sew Clothing Contracting	✓	✓			
315221 Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturing	✓	✓			
315222 Men's and Boys' Cut and Sew Suit, Coat and Overcoat Manufacturing	✓	✓			
315226 Men's and Boys' Cut and Sew Shirt Manufacturing	✓	✓			
315227 Men's and Boys' Cut and Sew Trouser, Slack and Jean Manufacturing	✓	✓			
315229 Other Men's and Boys' Cut and Sew Clothing Manufacturing	✓	✓			
315231 Women's and Girls' Cut and Sew Lingerie, Loungewear and Nightwear Manufacturing	✓	✓			
315232 Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing	✓	✓			
315233 Women's and Girls' Cut and Sew Dress Manufacturing	✓	✓			
315234 Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket and Skirt Manufacturing	✓	✓			
315239 Other Women's and Girls' Cut and Sew Clothing Manufacturing	✓	✓			

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315291	Infants' Cut and Sew Clothing Manufacturing	✓	✓			
315292	Fur and Leather Clothing Manufacturing	✓	✓			
315299	All Other Cut and Sew Clothing Manufacturing	✓	✓			
315990	Clothing Accessories and Other Clothing Manufacturing	✓	✓			
WOOD PRODUCT MANUFACTURING						
321919	Other Millwork	✓	✓	✓		
321920	Wood Container and Pallet Manufacturing	✓	✓	✓		
321991	Manufactured (Mobile) Home Manufacturing	✓	✓	✓		
321992	Prefabricated Wood Building Manufacturing	✓	✓	✓		
321999	All Other Miscellaneous Wood Product Manufacturing	✓	✓	✓		
CONVERTED PAPER PRODUCT MANUFACTURING						
322299	All Other Converted Paper Product Manufacturing	✓	✓		✓	
PRINTING AND RELATED SUPPORT ACTIVITIES						
323114	Quick Printing	✓	✓		✓	
323115	Digital Printing	✓	✓		✓	
323120	Support Activities for Printing	✓	✓		✓	
PLASTICS AND RUBBER PRODUCTS MANUFACTURING						
326198	All Other Plastic Product Manufacturing	✓	✓			
326290	Other Rubber Product Manufacturing	✓	✓			
NON-METALLIC MINERAL PRODUCT MANUFACTURING						
327390	Other Concrete Product Manufacturing	✓	✓			
327990	All Other Non-Metallic Mineral Product Manufacturing	✓	✓			
FABRICATED METAL PRODUCT MANUFACTURING						
332329	Other Ornamental and Architectural Metal Products Manufacturing	✓	✓	✓		✓
332439	Other Metal Container Manufacturing	✓	✓	✓		✓
332710	Machine Shops	✓	✓			
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	✓	✓	✓		✓
MACHINERY MANUFACTURING						
333299	All Other Industrial Machinery Manufacturing	✓	✓	✓		✓
333990	All Other General-Purpose Machinery Manufacturing	✓	✓	✓		✓
COMPUTER AND ELECTRONIC PRODUCT MANUFACTURING						
334310	Audio and Video Equipment Manufacturing	✓	✓	✓		
334610	Manufacturing and Reproducing Magnetic and Optical Media	✓	✓	✓		
335229	Other Major Appliance Manufacturing	✓	✓	✓		
335990	All Other Electrical Equipment and Component Manufacturing	✓	✓	✓		
OTHER MISCELLANEOUS MANUFACTURING						
339110	Medical Equipment and Supplies Manufacturing	✓	✓	✓		
339910	Jewellery and Silverware Manufacturing	✓	✓	✓		
339920	Sporting and Athletic Goods Manufacturing	✓	✓	✓		
339930	Doll, Toy and Game Manufacturing	✓	✓	✓		
339940	Office Supplies (except Paper) Manufacturing	✓	✓	✓		

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339950 Sign Manufacturing	✓	✓	✓	✓	
339990 All Other Miscellaneous Manufacturing	✓	✓	✓		
MISCELLANEOUS WHOLESALER-DISTRIBUTORS					
418190 Other Recyclable Material Wholesaler-Distributors	✓	✓			
418410 Chemical (except Agricultural) and Allied Product Wholesaler-Distributors	✓	✓			
TRANSPORTATION OPERATION (For maintenance and repair yard only)					
481110 Scheduled Air Transportation	✓	✓			
481214 Non-Scheduled Chartered Air Transportation	✓	✓			
481215 Non-Scheduled Specialty Flying Services	✓	✓			
482112 Short-Haul Freight Rail Transportation	✓	✓			
482113 Mainline Freight Rail Transportation	✓	✓			
482114 Passenger Rail Transportation	✓	✓			
483115 Deep Sea, Coastal and Great Lakes Water Transportation (except by Ferries)	✓	✓			
483116 Deep Sea, Coastal and Great Lakes Water Transportation by Ferries	✓	✓			
486110 Pipeline Transportation of Crude Oil	✓	✓			
486210 Pipeline Transportation of Natural Gas	✓	✓			
486910 Pipeline Transportation of Refined Petroleum Products	✓	✓			
486990 All Other Pipeline Transportation	✓	✓			
SUPPORT ACTIVITIES FOR TRANSPORTATION					
488111 Air Traffic Control	✓	✓			
488119 Other Airport Operations	✓	✓			
488190 Other Support Activities for Air Transportation	✓	✓			
488210 Support Activities for Rail Transportation	✓	✓			
488390 Other Support Activities for Water Transportation	✓	✓			
488490 Other Support Activities for Road Transportation	✓	✓			
488519 Other Freight Transportation Arrangement	✓	✓			
PROFESSIONAL, SCIENTIFIC AND TECHNICAL SERVICES					
541990 All Other Professional, Scientific and Technical Services	✓	✓			
ADMINISTRATIVE AND SUPPORT SERVICES					
561990 All Other Support Services	✓	✓			
EDUCATIONAL SERVICES (For colleges of applied arts and technology, report SO_2, NO_x, and HFC-134A emissions from heating or cooling systems if the emissions are equal to or greater than their respective reporting thresholds)					
611210 Community Colleges and C.E.G.E.P.s (collège d'enseignement générales et professionelles)	✓	✓		✓	
PHOTO FINISHING SERVICES (For commercial and professional photo finishing laboratories on a large scale basis)					
812921 Photo Finishing Laboratories (except One-Hour)	✓	✓			

NA	Not applicable. The facility must proceed to calculate and report emissions of contaminants against thresholds.
*	NAICS - North American Industry Classification System, Canada, Statistics Canada 1997.
**	See Section 2.2(2) of the Guideline.
***	The term "solvent" is described in the Glossary section of the Guideline.
****	The term "coating material" is described in the Glossary section of the Guideline.
✓	Criteria applicable to the respective sectors.

Table 4

References of Source Testing Methodologies for Emission Monitoring Systems

Environment Canada, Reference Method for the Monitoring of Gaseous Emissions from Fossil Fuel-fired Boilers EPS 1/RM/15 September 1990.
MOE Source Testing Code (Version #2) Report#ARB-66-80, November 1980.
U.S. EPA 40CFR60 Appendix A - Test Methods: Method 6 - Determination of sulfur dioxide emissions from stationary sources.*
U.S. EPA 40CFR60 Appendix A - Test Methods: Method 6A - Determination of sulfur dioxide, moisture, and carbon dioxide emissions from fossil fuel combustion sources.*
U.S. EPA 40CFR60 Appendix A - Test Methods: Method 6B - Determination of sulfur dioxide and carbon dioxide daily average emissions from fossil fuel combustion sources.*
U.S. EPA 40CFR60 Appendix A - Test Methods: Method 6C - Determination of Sulfur Dioxide Emissions From Stationary Sources (Instrumental Analyzer Procedure).*
U.S. EPA 40CFR60 Appendix A - Test Methods: Method 7 - Determination of nitrogen oxide emissions from stationary sources.*
U.S. EPA 40CFR60 Appendix A - Test Methods: Method 7A - Determination of nitrogen oxide emissions from stationary sources—Ion chromatographic method.*
U.S. EPA 40CFR60 Appendix A - Test Methods: Method 7B - Determination of nitrogen oxide emissions from stationary sources (Ultraviolet spectrophotometry).*
U.S. EPA 40CFR60 Appendix A - Test Methods: Method 7C - Determination of nitrogen oxide emissions from stationary sources—Alkaline-permanganate/colorimetric method.*
U.S. EPA 40CFR60 Appendix A - Test Methods: Method 7D - Determination of nitrogen oxide emissions from stationary sources—Alkaline-permanganate/ion chromatographic method.*
U.S. EPA 40CFR60 Appendix A - Test Methods: Method 7E - Determination of nitrogen oxide emissions from stationary sources (Instrumental Analyzer Procedure).*
Other source testing methods as approved by the Ministry.

* http://www.epa.gov/docs/epacfr40/chapt-I.info/subch-C/40P0060/40P060XA.pdf

Table 5

Annual and Smog Season Emissions Reporting Parameters

The following elements shall be included in a report submitted to the Director pursuant to Section 5 of the Guideline and made available to the public by the owner and operator of a facility upon request:

Notes: [1] The information within the square brackets represents the data storage format of the parameter.
The first letter in Aw, Nw or Nw.d means type of information, alphanumeric (A) or numeric (N).
The second part in Aw, Nw or Nw.d means the maximum width (w) and decimal places (d) of the field.
[2] '*' in front of a parameter means there may be multiple records/information.

1. Facility

Provincial Identifier (MOE) of the Discharge Facility [A10]
NPRI ID [A10]
Primary Industrial Classification (North America Industrial Classification System, NAICS) [NAICS reference table:A6]
Other NAICS (3 Additional NAICS, separated by comma) [NAICS reference table:A20]
Data Reporting Year [N4]
Reporting Period [REPT reference table:A4]
Specific Reporting Period, if applicable [Begin date:A8, end date:A8]
Company Name [A30]
Company Location - Address [2 lines: A30, A30]
Company Location - City, Province, Country, Postal Code [A20, A20, A10, A10]
Facility Name/Division [A30]
Facility Location - Address [2 lines: A30, A30]
Facility Location - City, Postal Code [A20, A6]
Facility Location - Geographical Reference [Latitude:N7.4, longitude:N8.4]
*Contact Person (who prepared the report) and Information [Name:A50, position:A20, tel.no.:A10, fax.no.:A10, email:A50]

1.1 Electricity Generation Sector Only

Design Capacity of the Facility (MW) [N10]
    *Type of Energy Source [ENERGY reference table:A4]
    *Fuel Type [FUEL reference table:A4]
    Amount of Electricity Generated by the facility annually [N20.9, UNIT reference table:A20]
    Amount of Electricity Generated by the facility during the smog season
        (May 1 - September 30) [N20.9, UNIT reference table:A20]

2. Facility-wide Air Emission Data

For annual reporting
*CAS number of Contaminant [CONTAM reference table:A11]
*Emissions [N20.9, UNIT reference table and Code:A20]
*Mode of Releases of Emissions [RMODE reference table:A4]
*Estimation Method [METHOD reference table:A10]

For smog season reporting (May 1 - September 30)
Report ONLY SO_2, NO_x, VOC, PM, PM_{10}, $PM_{2.5}$ and CO emissions.
*CAS number of Contaminant [CONTAM reference table:A11]
*Emissions [N20.9, UNIT reference table:A20]
*Mode of Releases of Emissions [RMODE reference table:A4]
*Estimation Method [METHOD reference table:A10]

Reference Tables for Reporting and Recording Keeping

The following reference tables are available to assist in reporting and record keeping. (See Appendix E for details)

1. CDEV: Control Devices
2. CONTAM: Contaminant List
3. DUEQT: Discharge Unit Type
4. ENERGY: Energy Type
5. FUEL: Fuel Type
6. FUGTYPE: Fugitive Emission Type
7. METHOD: Emission Estimation Method Code
8. NAICS: North America Industrial Classification System Code
9. REPT: Reporting Period
10. RMODE: Release Mode
11. ROADTYPE: Road Type
12. SCC: Source Classification Code
13. TANK: Storage Tank Type
14. UNIT: Engineering Units

Table 6

Quarterly Emissions Reporting Parameters

The following elements shall be included in a report submitted to the Director pursuant to Section 5 of the Guideline and made available to the public by the owner and operator of a facility upon request:

Notes: [1] The information within the square brackets represents the data storage format of the parameter.
The first letter in Aw, Nw or Nw.d means type of information, alphanumeric (A) or numeric (N).
The second part in Aw, Nw or Nw.d means the maximum width (w) and decimal places (d) of the field.
[2] '*' in front of a parameter means there may be multiple records/information.

1. Facility

Provincial Identifier (MOE) of the Discharge Facility [A10]
NPRI ID [A10]
Primary Industrial Classification (North America Industrial Classification System, NAICS) [NAICS reference table:A6]
Other NAICS (3 Additional NAICS, separated by comma) [NAICS reference table:A20]
Data Reporting Year [N4]
Reporting Period [REPT reference table:A4]
Specific Reporting Period, if applicable [Begin date:A8, end date:A8]
Company Name [A30]
Company Location - Address [2 lines: A30, A30]
Company Location - City, Province, Country, Postal Code [A20, A20, A10, A10]
Facility Name/Division [A30]
Facility Location - Address [2 lines: A30, A30]
Facility Location - City, Postal Code [A20, A6]
Facility Location - Geographical Reference [Latitude:N7.4, longitude:N8.4]
*Contact Person (who prepared the report) and Information [Name:A50, position:A20, tel.no.:A10, fax.No.:A10, email:A50]

2. Discharge Unit(s) to Which Reporting of Emission Monitoring System Applies

***Discharge Unit to which reporting of emission monitoring system applies**
Discharge Unit Identifier (ID) [A10]
Discharge Unit Name [A30]
Discharge Unit Description [A30]
Discharge Unit Type [DUEQT reference table:A3]
Discharge Unit Name Plate Capacity [N10, (MW) for electricity generation sector; (MMBTU) for non-electricity generation sectors]
Discharge Unit Activity [N20.9, electricity generated (MWH) for electricity generation sector; heat input (MMBTU) for non-electricity generation sectors]
Type of Energy Source [ENERGY reference table:A4]
Fuel Type [FUEL reference table:A4]

3. Discharge Unit(s) Air Emission Data

The following SO_2 and NO_x emission information would be required for quarterly, cumulative year-to-date, and cumulative smog-season-to-date reporting.

SO_2 Estimation Method [METHOD reference table:A10]
SO_2 Emission Control Device [CDEV reference table:A3]
SO_2 Emission [N20.9, in tonnes]
SO_2 Average Emission Rate [N20.9, for electricity generation sector only (kg/MWH)]

NO_x Estimation Method [METHOD reference table:A10]
NO_x Emission Control Device [CDEV reference table:A3]
NO_x Emission [N20.9, in tonnes]
NO_x Average Emission Rate [N20.9, for electricity generation sector only (kg/MWH)]

Information that does not change from one report to the next (e.g., address, location, etc.) can be omitted from reports subsequent to the first one.

Reference Tables for Reporting and Recording Keeping

The following reference tables are available to assist in reporting and record keeping.
(See Appendix E for details)

1. CDEV: Control Devices
2. CONTAM: Contaminant List
3. DUEQT: Discharge Unit Type
4. ENERGY: Energy Type
5. FUEL: Fuel Type
6. FUGTYPE: Fugitive Emission Type
7. METHOD: Emission Estimation Method Code
8. NAICS: North America Industrial Classification System Code
9. REPT: Reporting Period
10. RMODE: Release Mode
11. ROADTYPE: Road Type
12. SCC: Source Classification Code
13. TANK: Storage Tank Type
14. UNIT: Engineering Units

Table 7

Record Keeping Parameters for Annual and Smog Season Emissions

All facilities to which either Section 5.1, 5.2, 5.3 and/or 5.4 of the Guideline applies shall make a record annually of the following parameters where applicable (the records shall be kept on-site and made available to the MOE on request for a period of 7 years):

Notes: [1] When a paragraph is indented, it means it is a sub-level table.
[2] The information within the square brackets represents the data storage format of the parameter.
The first letter in Aw, Nw or Nw.d means type of information, alphanumeric (A) or numeric (N).
The second part in Aw, Nw or Nw.d means the maximum width (w) and decimal places (d) of the field.
[3] '*' in front of a parameter means there may be multiple records/information.

1. Facility

Provincial Identifier (MOE) of the Discharge Facility [A10]
NPRI ID [A10]
Primary Industrial Classification (North America Industrial Classification System, NAICS) [NAICS reference table:A6]
Other NAICS (3 Additional NAICS, separated by comma) [NAICS reference table:A20]
Data Reporting Year [N4]
Reporting Period [REPT reference table:A4]
Specific Reporting Period, if applicable [Begin date:A8, end date:A8]
Company Name [A30]
Company Location - Address [2 lines: A30, A30]
Company Location - City, Province, Country, Postal Code [A20, A20, A10, A10]
Facility Name/Division [A30]
Facility Location - Address [2 lines: A30, A30]
Facility Location - City, Postal Code [A20, A6]
Facility Location - Geographical Reference [Latitude:N7.4, longitude:N8.4]
*Contact Person (who prepared the report) and Information [Name:A50, position:A20, tel.No.:A10, fax.No.:A10, email:A50]
*Process Diagram [hardcopy, computer graphics file, or Acrobat PDF format] showing the location of the discharge units (generation units in the electricity sector), any stack through which the contaminants are discharged from the discharge unit, and every pollution control device that is intended to reduce emissions of the contaminants from the discharge unit
*Provincial Permit Number(s) (e.g., Certificate of Approval) (separated by comma) [A50]

1.1 For Electricity Generation Sector Only

Design Capacity of the Facility (MW) [N10]
Type of Energy Source [ENERGY reference table:A4]
Amount of Electricity Generated by the facility annually [N20.9, UNIT reference table:A20]
Amount of Electricity Generated by the facility during the smog season (May 1 - September 30) [N20.9, UNIT reference table:A20]
- *Electricity Generation Equipment Type and Description [DUEQT reference table:A3, A30]

2. Facility-wide Air Emission Data

For annual reporting
*CAS number of Contaminant [CONTAM reference table:A11]
*Emissions [N20.9, UNIT reference table:A20]
*Mode of Releases of Emissions [RMODE reference table:A4]
*Estimation Method [METHOD reference table:A10]

For smog season reporting (May 1 - September 30)
Report ONLY SO_2, NO_X, VOC, PM, PM_{10}, $PM_{2.5}$ and CO emissions.
*CAS number of Contaminant [CONTAM reference table:A11]
*Emissions [N20.9, UNIT reference table:A20]
*Mode of Releases of Emissions [RMODE reference table:A4]
*Estimation Method [METHOD reference table:A10]

3. *Stack

Stack Identifier (ID) [A10]
Stack Description [A30]
Stack Gas Flow Rate, m3/min [N7.2]
Stack Gas Temperature, °C [N7.2]
Stack Equivalent Diameter, m [N7.2]
Stack Height above Grade, m [N7.2]

Stack Height above Roof, m [N7.2]
Building Dimensions in metres and orientation from North [Length:N7.2, Width:N7.2, Diameter:N7.2, Height:N7.2, Orientation:N7.2]
    *Upstream Process ID [{Link}Process ID:A10]
    *CAS of Contaminant [CONTAM reference table:A11]
    *Emissions [N20.9, UNIT reference table:A20]
    *Estimation Method [METHOD reference table:A10]

4. *Fuel Consumption, Facility Level
Fuel Identifier [A10]
Fuel Type [FUEL reference table:A4]
Fuel Quality
[Heating value:N20.9, UNIT reference table:A20, %S:N7.2, %Ash:N7.2, %moisture:N7.2, *(species:CONTAM reference table:A11, %concentration:N7.2)]
Total Fuel Consumption [N20.9, UNIT reference table:A20]
    *Apportionment (%) to Combustion Equipment [{Link}Process ID:A10,N7.2]

5. *Solvent Consumption, Facility Level
Solvent Identifier (ID) [A10]
Solvent Description [A30]
MSDS No. [A20]
Solvent Parameters [%volatile:N7.2, SG:N7.2, *(species:CONTAM reference table:A11, %composition:N7.2]
Total Solvent Consumption [N20.9]
    *Apportionment (%) to Process [{Link}Process ID:A10, N7.2]

6. *Process (Combustion)
Process Identifier (ID) [A10]
Process Description [A30]
Fuel Identifier [{Link}Fuel ID,A10]
SCC Code [SCC reference table:A11]
Process Activity [Quantity:N20.9, UNIT reference table:A20]
Combustion Equipment Type [DUEQT reference table:A3]
Equipment Parameters [Designed capacity:N10, UNIT reference table:A20, Combustion Temperature, °C:N10]
    *CAS of Contaminant [CONTAM reference table:A11]
    *Emissions before Control Device [N20.9, UNIT reference table:A20]
        *Emission Control Device [CDEV reference table:A3]
        *Control Efficiency [N7.2]
    *Emissions after Control Device [N20.9, UNIT reference table:A20]
    *Estimation Method [METHOD reference table:A10]
Exhaust Stack ID [{Link}Stack ID:A10]
Operating Schedule, Number of Operating Weeks in Each Month [January:N1, February:N1, March:N1, April:N1, May:N1, June:N1, July:N1, August:N1, September:N1, October:N1, November:N1, December:N1, separated by comma]
Operating Schedule, Percent of Facility Operating Capacity in Each Month [January:N3, February:N3, March:N3, April:N3, May:N3, June:N3, July:N3, August:N3, September:N3, October:N3, November:N3, December:N3, separated by comma]

7. *Process (Non-combustion, non-fugitive)
Process Identifier ID [A10]
Process Description [A30]
Solvent Identifier [{Link}Solvent ID, A10] or Empty
SCC Code [SCC reference table:A11]
Process Activity [Quantity:N20.9, UNIT reference table:A20]
    *CAS of Contaminant [CONTAM reference table:A11]
    *Emissions before Control Device [N20.9, UNIT reference table:A20]
        *Emission Control Device [CDEV reference table:A3]
        *Control Efficiency [N7.2]
    *Emissions after Control Device [N20.9, UNIT reference table:A20]
    *Estimation Method [METHOD reference table:A10]
Exhaust Stack ID [{Link}Stack ID:A10]
Operating Schedule, Number of Operating Weeks in Each Month [January:N1, February:N1, March:N1, April:N1, May:N1, June:N1, July:N1, August:N1, September:N1, October:N1, November:N1, December:N1, separated by comma]
Operating Schedule, Percent of Facility Operating Capacity in Each Month [January:N3, February:N3, March:N3, April:N3, May:N3, June:N3, July:N3, August:N3, September:N3, October:N3, November:N3, December:N3, separated by comma]

8. *Fugitive - Equipment Leakage

- Fugitive Source Type [FUGTYPE reference table:A4]
- Equipment Identifier ID [A10]
- Equipment Description [A30]
- SCC Code [SCC reference table:A11]
- Equipment Activity [Quantity:N20.9, UNIT reference table:A20]
    - *CAS of Contaminant [CONTAM reference table:A11]
    - *Emissions before Control Device [N20.9, UNIT reference table:A20]
        - *Emission Control Device [CDEV reference table:A3]
        - *Control Efficiency [N7.2]
    - *Emissions after Control Device [N20.9, UNIT reference table:A20]
    - *Estimation Method [METHOD reference table:A10]
- Exhaust Stack ID [{Link}Stack:A10]
- Operating Schedule, Number of Operating Weeks in Each Month [January:N1, February:N1, March:N1, April:N1, May:N1, June:N1, July:N1, August:N1, September:N1, October:N1, November:N1, December:N1, separated by comma]
- Operating Schedule, Percent of Facility Operating Capacity in Each Month [January:N3, February:N3, March:N3, April:N3, May:N3, June:N3, July:N3, August:N3, September:N3, October:N3, November:N3, December:N3, separated by comma]

9. *Fugitive - Road Dust within Facility

- Fugitive Source Type [FUGTYPE reference table:A4]
- Road Identifier [A10]
- Road Description [A30]
- Type of Road [ROADTYPE reference table:A3]
- SCC Code [SCC reference table:A11]
- Length of Service Road [N10, UNIT reference table:A20, speed limit:N10, UNIT reference table:A20]
- Surface Material Silt Content, % [N7.2]
- Surface Material Silt Loading, g/m2 [N7.2]
- Surface Material Moisture Content, % [N7.2]
- Traffic Volume/Pattern, trucks/day [N10]
- Vehicle Parameters [Mean weight, tonnes:N10, average number of wheel:N10]
    - *CAS of Contaminant [CONTAM reference table:A11]
        - *Dust Suppression Method/Device [CDEV reference table:A3]
        - *Control Efficiency [N7.2]
    - *Emissions [N20.9, UNIT reference table:A20]
    - *Estimation Method [METHOD reference table:A10]

10. *Storage Tanks (volatile organics/fuel)

- Fugitive Source Type [FUGTYPE reference table:A4]
- Tank Identifier ID [A10]
- Tank Description [A30]
- Tank Type [TANK reference table:A4]
    - *Material Stored [{Link}Fuel ID or {Link}Solvent ID:A10]
    - *SCC Code for Breathing/Standing Loss [SCC reference table:A11]
    - *Storage Tank Capacity [Quantity:N20.9, UNIT reference table:A20]
    - *CAS of Contaminant [CONTAM reference table:A11]
        - *Emission Control Device at Tank [CDEV reference table:A3]
        - *Control Efficiency [N7.2]
    - *Emission [N20.9, UNIT reference table:A20]
    - *Estimation Method [METHOD reference table:A10]

    - *SCC Code for Working/Withdrawal Loss [SCC reference table:A11]
    - *Annual Throughput [Quantity:N20.9, UNIT reference table:A20]
    - *CAS of Contaminant [CONTAM reference table:A11]
        - *Emission Control Device at Tank [CDEV reference table:A3]
        - *Control Efficiency [N7.2]
    - *Emission afer Control [N20.9, UNIT reference table:A20]
    - *Estimation Method [METHOD reference table:A10]

11. *Exposed Storage Piles

- Fugitive Source Type [FUGTYPE reference table:A4]
- Storage Pile Identifier ID (A10)
- Storage Pile Description (A30)
- SCC Code [SCC reference table:A11]
- Material Storage Activity [Material:A30, quantity:N20.9, UNIT reference table:A20]
- Material Parameters [%silt content:N7.2, duration (days):N10, exposed area, m2:N10, erosion potential, g/m2:N7.2]
    - *CAS of Contaminant [CONTAM reference table:A11]
        - *Emission Control Device or Method [CDEV reference table:A3]
        - *Control Efficiency [N7.2]
    - *Emission [N20.9, UNIT reference table:A20]
    - *Estimation Method [METHOD reference table:A10]

12. *Other Fugitive Emissions

Fugitive Source Type [FUGTYPE reference table:A4]
Identifier ID [A10]
Description [A30]
SCC Code [SCC reference table:A11]
Activity Level [Quantity:N20.9, UNIT reference table:A20]
*CAS of Contaminant [CONTAM reference table:A11]
        *Emission Control Device or Method [CDEV reference table:A3]
        *Control Efficiency [N7.2]
    *Emission [N20.9, UNIT reference table:A20]
    *Estimation Method [METHOD reference table:A10]

Reference Tables for Reporting and Recording Keeping

The following reference tables are available to assist in reporting and record keeping. (See Appendix E for details)

1. CDEV: Control Devices
2. CONTAM: Contaminant List
3. DUEQT: Discharge Unit Type
4. ENERGY: Energy Type
5. FUEL: Fuel Type
6. FUGTYPE: Fugitive Emission Type
7. METHOD: Emission Estimation Method Code
8. NAICS: North America Industrial Classification System Code
9. REPT: Reporting Period
10. RMODE: Release Mode
11. ROADTYPE: Road Type
12. SCC: Source Classification Code
13. TANK: Storage Tank Type
14. UNIT: Engineering Units

Table 8

Record Keeping Parameters for Quarterly Emissions

All facilities to which Section 5.5 of the Guideline applies shall make a record annually of the following parameters where applicable (the records shall be kept on-site an made available to the MOE on request for a period of 7 years):

Notes: [1] When a paragraph is indented, it means it is a sub-level table.
[2] The information within the square brackets represents the data storage format of the parameter. The first letter in Aw, Nw or Nw.d means type of information, alphanumeric (A) or numeric (N). The second part in Aw, Nw or Nw.d means the maximum width (w) and decimal places (d) of the field.
[3] "*" in front of a parameter means there may be multiple records/information.

1. Facility

Provincial Identifier (MOE) of the Discharge Facility [A10]
NPRI ID [A10]
Primary Industrial Classification (North America Industrial Classification System, NAICS) [NAICS reference table:A6]
Other NAICS (3 Additional NAICS, separated by comma) [NAICS reference table:A20]
Data Reporting Year [N4]
Reporting Period [REPT reference table:A4]
Specific Reporting Period, if applicable [Begin date:A8, end date:A8]
Company Name [A30]
Company Location - Address [2 lines: A30, A30]
Company Location - City, Province, Country, Postal Code [A20, A20, A10, A10]
Facility Name/Division [A30]
Facility Location - Address [2 lines: A30, A30]
Facility Location - City, Postal Code [A20, A6]
Facility Location - Geographical Reference [Latitude:N7.4, longitude:N8.4]
*Contact Person (who prepared the report) and Information [Name:A50, position:A20, tel.No.:A10, fax.No.:A10, email:A50]
*Provincial Permit Number(s) (e.g., Certificate of Approval) (separated by comma) [A50]

2. Discharge Unit(s) to Which Reporting of Emission Monitoring System Applies

***Stack to which reporting of emission monitoring system applies**
Stack Identifier (ID) [A10]
Stack Description [A30]

***Discharge Unit to which reporting of emission monitoring system applies**
Discharge Unit Identifier (ID) [A10]
Discharge Unit Name [A30]
Discharge Unit Description [A30]
Discharge Unit Type [DUEQT reference table:A3]
Discharge Unit Name Plate Capacity [N10, (MW) for electricity generation sector; (MMBTU) for non-electricity generation sectors]
Discharge Unit Activity [N20.9, electricity generated (MWH) for electricity generation sector; heat input (MMBTU) for non-electricity generation sectors]
Type of Energy Source [ENERGY reference table:A4]
Fuel Type [FUEL reference table:A4]

3. Discharge Unit(s) Air Emission Data

The following SO_2 and NO_x emission information would be required for quarterly, cumulative year-to-date, and cumulative smog-season-to-date reporting.

SO_2 Estimation Method [METHOD reference table:A10]
SO_2 Emission Control Device [CDEV reference table:A3]
SO_2 Emission [N20.9, in tonnes]
SO_2 Average Emission Rate [N7.2, for electricity generation sector only (kg/MWH)]

NO_x Estimation Method [METHOD reference table:A10]
NO_x Emission Control Device [CDEV reference table:A3]
NO_x Emission [N20.9, in tonnes]
NO_x Average Emission Rate [N7.2, for electricity generation sector only (kg/MWH)]

For additional record keeping requirements for reporting facilities using CEM or PEM for Emission Monitoring System reporting, please refer to the "Guideline for the Installation and Operation of Continuous Emission Monitoring Systems (CEMS) and their Use for Reporting Under the Provisions of Regulation O. Reg. 127/01", Ontario Ministry of the Environment, April 2001[7].

Reference Tables for Reporting and Recording Keeping

The following reference tables are available to assist in reporting and record keeping.
(See Appendix E for details)

1. CDEV: Control Devices
2. CONTAM: Contaminant List
3. DUEQT: Discharge Unit Type
4. ENERGY: Energy Type
5. FUEL: Fuel Type
6. FUGTYPE: Fugitive Emission Type
7. METHOD: Emission Estimation Method Code
8. NAICS: North America Industrial Classification System Code
9. REPT: Reporting Period
10. RMODE: Release Mode
11. ROADTYPE: Road Type
12. SCC: Source Classification Code
13. TANK: Storage Tank Type
14. UNIT: Engineering Units

REFERENCES

1. USEPA, "Locating and Estimating Air Emissions from Sources <series>", U.S. Environmental Protection Agency, 1984 - 1999.
URL: http://www.epa.gov/ttn/chief/ap42etc.html#LE

2. USEPA, "Factor Information Retrieval System (FIRE)", U.S. Environmental Protection Agency.
URL: http://www.epa.gov/ttn/chief/fire.html

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Appendices

Appendix A

Examples of Air Emission Calculations

(For Information Only)

Appendix A.1 Calculation of Annual Emissions Using Continuous Emission Monitoring System (CEMS) Data

Company A has a Continuous Emission Monitoring System (CEMS) to measure emissions for an oil fired boiler.

Example of a CEMS Output For a Boiler Burning No.6 Fuel Oil

Period	O_2 (%V)	Fuel Rate, Q_f (10^3 kg/hr)	Stack Gas Flow Rate, Q (dRm^3/min)	Measured Concentration C_x, (ppmvd)			Calculated Emission Rate, Er_x (see equations below)		
				SO_2	NO_x	CO	SO_2 (kg/hr)	NO_x (kg/hr)	CO (kg/hr)
12:00	2.1	20.9	4,467	1,004	216.2	31.5	704	109	10
12:15	2	21.1	4,491	1,100	200.6	25.5	776	102	8
12:30	2.1	20.9	4,467	1,050	216.7	25.1	737	109	8
12:45	1.9	21	4,438	1,070	220.5	20.8	746	110	6
13:00	1.9	21.2	4,496	1,070	213.8	19.4	756	109	6
13:15	1.8	21	4,425	1,050	214.0	19.4	730	107	6
13:30	2	21	4,472	1,100	209.1	21.5	773	106	7
13:45	2	21.1	4,491	1,078	210.8	50.3	760	107	16

The following equation is used to calculate the emissions from the measured concentrations:

$$Er_X = \frac{(C_X * MW_X * Q * 60)}{(V * 10^6)}$$

Where Er_x = Emission rate of contaminant *x*, kg/hr
C_x = Concentration of contaminant *x*, ppmvd
MW_x = Molecular weight of the contaminant *x*, g/g-mole
MW_{SO_2} = 64, MW_{NO_x} = 46 (as MW_{NO_2}), MW_{CO} = 28
Q = Dry stack gas volumetric flow rate at reference conditions, dRm^3/min
(reference conditions: 101.325 kPa and 25°C)
V = Volume occupied by 1 mole of ideal gas at reference conditions
(= 24.45 litres/g-mole)

Total SO_2 emissions for the 1st hour = (704+776+737+746) /4 kg
= 741 kg SO_2

Total SO_2 emissions for the 2nd hour = (756+730+773+760) /4 kg
= 755 kg SO_2

To calculate the SO_2 emissions for the reporting period, sum all hourly emission values for that reporting period.

To calculate the annual emissions, sum all hourly emission values for the year or sum the four quarterly emission values for the year.

Appendix A.2 Calculation of Annual Emissions Using Predictive Emission Monitoring (PEM)

The following is an example of Predictive Emission Monitoring (PEM) analysis for particulate matter (PM) emissions from a boiler unit burning a specific blend of coal at an average equipment loading condition.

Example of a PEM Analysis of Input Coal Flow and Contaminant Emission										
Sub-bituminous Coal Flowrate, tonnes/hour	61	62	63	64	65	66	67	68	69	70
Particulate Matter Emission, kg/hr	15	16	16	16	16	17	17	17	17	18

PEM Monitoring Results		Predicted Particulate Matter (PM) Emission Rate Er, (kg/hour)
Time (hour)	Coal Flowrate (tonnes/hour)	
1	64	16
2	64	16
3	66	17
4	65	16
5	66	17
6	67	17
7	68	17
8	69	17
9	70	18
10	70	18
Total for a period of 10 hours		
	669 tonnes	169 kg

The average PM emission rate = 169 kg/10 hour = 16.9 kg PM/hr

If the boiler operated under the same conditions for 5,000 hours in a year, then the calculated annual PM emissions (E_x) will be:

$$E_X = D * Er_X$$

Where E_x = Emission of contaminant *x*, kg/year
D = Discharge unit annual operating hours, hours
Er_x = Average emission rate of contaminant *x*, kg/hr

E_{PM} = 5,000 * 16.9 = 84,500 kg PM /year

Reporting Threshold Consideration

Contaminant	CAS	Calculated Emission (kg/yr)	Threshold (kg/yr)	Equal to or Greater than Threshold	Reported Value (kg)
PM	N/A - M08	84,500	20,000 *	✓	84,500

* MOE release based threshold (Table 2A)

The owner and operator of a facility must report the emissions of PM since its facility emissions of PM exceed the reporting threshold for that contaminant.

Appendix A.3 Calculation of Annual Emissions Using Source Testing Results

Company C has conducted source tests during normal operating conditions. The summary of the test results are as follows:

Summary of Source Testing Results				
Source Testing Results	#1	#2	#3	Average
Stack gas flow rate, Q (dm^3/min)	2,000	2,100	1,900	2,000
SO_2, kg/hr	100	120	80	100
NO_x (expressed as NO_2), kg/hr	60	65	40	55

The estimated emission at test conditions is:

$$E_X = Er_X * T$$

Where E_x = Emission of contaminant *x*, kg/year
Er_x = Average emission rate of contaminant *x*, kg/hr
T = Time, total operating hours in a given year

If the process operated 7,000 hours under normal (i.e., testing) conditions in the reporting year, then the calculated annual emission of SO_2 is:

$$E_{SO_2} = 100 \text{ kg/hr} * 7{,}000 \text{ hr} = 700{,}000 \text{ kg/yr}$$

For NO_x emissions, the reporting requirement is that NO_x has to be expressed as NO (not NO_2). Thus, conversion to NO is required:

$$NO_x \text{ (expressed as NO)} = 0.6522 * NO_x \text{ (expressed as } NO_2)$$
$$= 0.6522 * 55 = 35.9 \text{ kg/hr}$$

$$E_{NO_x} = 35.9 \text{ kg/hr} * 7{,}000 \text{ hr} = 251{,}300 \text{ kg/year (note: expressed as NO)}$$

Reporting Threshold Consideration

Contaminant	CAS	Calculated Emission (kg/yr)	Threshold (kg/yr)	Equal to or Greater than Threshold	Reported Value (kg)
Sulphur Dioxide, SO_2	7446-09-5	700,000	20,000 *	✓	700,000
Oxides of Nitrogen (as NO)	10102-43-9	251,300	14,000 *	✓	251,300

* MOE release based threshold (Table 2A)

Company C must report its emissions of the above contaminants since its facility emissions for each contaminant exceed the respective reporting thresholds.

Appendix A.4 Estimation of Annual Emissions Using Mass Balance Method

Company D applied 15,000 litres of 'ECOAT' (a surface coating compound) in a given year. What should the company report?

In general, coatings consist of resins (binders), pigments, additives, solvents, diluents, and thinners. Resins, pigments, and additives are the solid (non-evaporative or non-volatile) portion of the coating. Conversely, the volatile portion of the coating can consist of water, solvents, diluents, and thinners. These compounds evaporate during the mixing, application, and curing of the coating. Most solvents, diluents, and thinners contain VOCs.

The mass balance method is used here to calculate the VOC emissions and determine MPO quantities of individual contaminants.

Mass Balance Equation

$$M_e = M_i - M_p - M_a - M_c$$

Where M_e = Mass of compound A emitted, kg
M_i = Mass of compound A in the input stream, kg
M_p = Mass of compound A in the finishing product, kg
M_a = Mass of compound A accumulated in the system, kg
M_c = Mass of compound A captured for recovery or disposal, kg

For this coating process operation, there is no loss of coating compound to the coating equipment and no loss to the system's liquid/solid waste streams. All the volatiles, including VOCs that are in a particular coating, are emitted into the atmosphere.

In order to apply the mass balance approach, the VOC content in the coating compound needs to be established or obtained from Material Data Safety Sheet (MSDS) for that compound. The annual consumption of the compound could be obtained from the facility's operation log or sales slips.

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ECOAT
SUPPLIER: ABCDE CORP

SECTION 2 - COMPOSITION /INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Percent by weight
Methyl Ethyl Ketone	78-93-3	25%
Xylene	1330-20-7	25%
Ethyl Benzene	100-41-4	15%
N-Butyl Alcohol	123-86-4	10%
Carbon Black	133-86-4	<2%
Other		balance

SECTION 3 - PHYSICAL AND CHEMICAL PROPERTIES

Specific Gravity : 1.35 Percent volatiles:75% by weight

Note : In some cases, the % of volatiles value reported in the MSDS contains water and other non-VOC components. The quantities of these components, if they can be identified, should be excluded from the % volatiles during VOC emission calculations.

Determination of Reporting Applicability for Table 2A Contaminants

As *Company D* used more than 3,000 kg/yr of coating material, it meets one of the reporting criteria listed in Section 2.2 of the Guideline. *Company D* then has to assess the Table 2A contaminants emitted and compare the emissions against the corresponding thresholds.

The following steps show how the ***mass balance approach*** is used to calculate VOC (from Table 2A contaminant list) emissions.

The following equations are used by this company:

1. Calculate uncontrolled VOC emissions from the coating material using the above MSDS

$$E_{voc} = Q * p * d / 100$$

Where E_{VOC} = Total uncontrolled VOC emission, kg
Q = Total annual consumption of coating material, litres
p = Density of coating material, kg/L
d = VOC content by weight in coating material, %

Density of coating material = 1.35 * 1 kg/litre = 1.35 kg/litre (from MSDS)
d = 75 % (from MSDS)

Uncontrolled VOC emission = 15,000 * 1.35 * 75 / 100
= 15,188 kg / year

Reporting Threshold Consideration

Contaminant	CAS	Calculated Emission (kg/yr)	Threshold (kg/yr)	Equal to or Greater than Threshold	Reported Value (kg)
VOC	N/A - M16	15,188	10,000 *	✓	15,188

* MOE release based threshold (Table 2A)

Company D must report its emissions of VOCs since its facility emissions of VOCs exceeds the reporting threshold for that contaminant.

Determination of Reporting Applicability for Table 2C Contaminants

Company D also has to assess the contaminants manufactured, processed or otherwise used (MPO) within the facility. The following steps show how the ***mass balance approach*** is used to calculate the MPO quantities of contaminants.

2. Calculate MPO quantities of an individual compound

$$M_Y = Q * p * w_Y / 100$$

Where M_Y = Quantity of compound y in the coating material, kg
Q = Total annual consumption of coating material, litres
p = Density of coating material, kg/L
w_Y = Percent by weight of compound y in the coating material, %

Methyl Ethyl Ketone

$M_{\text{Methyl Ethyl Ketone}}$ = 15,000 litres * 1.35 kg/litres * 25/100 = 5,063 kg

Xylene

M_{xylene} = 15,000 litres * 1.35 kg/litres * 25/100 = 5,063 kg

Ethyl Benzene

$M_{\text{Ethyl Benzene}}$ = 15,000 litres * 1.35 kg/litres * 15/100 = 3,085 kg

N-Butyl Alcohol

$M_{\text{N-Butyl Alcohol}}$ = 15,000 litres * 1.35 kg/litres * 10/100 = 2,025 kg

MPO Threshold Consideration

Contaminant	CAS	Calculated MPO Quantity (kg/yr)	Threshold (kg/yr)
N-Butyl Alcohol	71-36-3	2,025	10,000 ***
Ethylbenzene	100-41-4	3,085	10,000 ***
Methyl Ethyl Ketone	78-93-3	5,063	10,000 ***
Xylene (mixed)	1330-20-7	5,063	10,000 ***

*** NPRI MPO threshold (Table 2C)

Company D is not required to proceed to calculate and report the emissions of the above contaminants to air since the respective MPO thresholds were not exceeded.

Appendix A.5 Estimation of Annual Emissions Using Fuel Analysis

Fuel analysis can be used to predict emissions based on the application of conservation laws. The presence of certain elements in fuels may be used to predict their presence in emission streams. This includes toxic elements such as metals found in coal as well as other elements such as sulphur that may be converted to other compounds during the combustion process.

The basic equation used in fuel analysis emission estimation is:

$$Er_{Xe} = Q_f * C_X * \frac{(MW_{Xe})}{(MW_X)} * \frac{(100 - CE_{Xe})}{100}$$

Where
Er_{Xe} = Emission rate of contaminant *xe*, kg/hr
Q_f = Fuel flow rate, kg/hr
C_x = Concentration of contaminant *x* in fuel, g/g-fuel
MW_{Xe} = Molecular weight of contaminant *xe* emitted, g/g-mole
MW_X = Molecular weight of contaminant *x* in fuel, g/g-mole
CE_{Xe} = Overall emission control efficiency of contaminant *xe*, %

SO_2 emissions from coal combustion can be calculated based on the concentration of sulphur in the coal. This approach assumes complete conversion of sulphur to SO_2. Therefore, for every kg of sulphur (MW = 32g) burned, 2 kg of SO_2 (MW = 64 g) are emitted. The application of this emission estimation technique is shown as follows:

Q_f = 20,000 kg/hr
C_S = 1.5%
MW_{SO_2} = Molecular weight of SO_2 emitted (= 64)
MW_S = Molecular weight of sulphur in fuel (= 32)
CE_{SO_2} = 90%

Hourly emission of SO_2 = 20,000 * 1.5/100 * (64/32) * (100 - 90)/100 = 60 kg/hr

If the boiler is operated 8,000 hours per year, then

Annual emission of SO_2 = hourly emission rate * number of operating hours/year
= 60 kg/hr * 8,000 hr = 480,000 kg

Reporting Threshold Consideration

Contaminant	CAS	Calculated Emission (kg/yr)	Threshold (kg/yr)	Equal to or Greater than Threshold	Reported Value (kg)
Sulphur Dioxide, SO_2	7446-09-5	480,000	20,000 *	✓	480,000

* MOE release based threshold (Table 2A)

The owner and operator of a facility must report the emissions of sulphur dioxide since its facility emissions of sulphur dioxide exceed the reporting threshold for that contaminant.

Appendix A.6 Estimation of Annual Emissions Using Emission Factors

The following example shows the general approach in using the emission factors method to calculate emissions from an electric induction furnace process. It should be noted that emissions of all the contaminants in the emission profile are calculated and shown here for completeness. Facilities should be aware that emission calculations of any of the Table 2B and 2C contaminants are required only if they meet their respective MPO requirement.

Foundry F produced 5,000 tonnes of grey iron in a given year. The scrap metal was melted in an electric induction furnace and made into iron castings. *Foundry F* has to (i) calculate the emissions of applicable contaminants listed in Table 2A and compare against the respective contaminant reporting thresholds; and (ii) evaluate the MPO quantities of applicable contaminants listed in Tables 2B and 2C, and calculate the emissions of the contaminants that meet their respective MPO requirements.

Emission factors are commonly used when site-specific stack monitoring data are unavailable. These established emission factors are available from many sources[1,2,3,5,6].

The basic equation used in emission factor emissions calculation is:

$$E_X = BQ * EF_X * \frac{100 - CE_X}{100}$$

Where E_X = Emission of contaminant x, kg
BQ = Activity rate or base quantity (BQ), BQ unit
EF_X = Uncontrolled emission factor of contaminant *x*, kg/BQ unit
CE_X = Overall emission control efficiency of contaminant *x*, %

or

$$E_X = BQ * CEF_X$$

Where E_X = Emission of contaminant *x*, kg
BQ = Activity rate or base quantity (BQ), BQ unit
CEF_X = Controlled emission factor of contaminant *x*, kg/BQ unit

The following steps shows how to obtain the emission factors for this particular process:

I. FIRE database[2]
The following emission factors are available.

SCC: 3-04-003-03 Description: Grey Iron Foundries/Electric Induction Furnace	
Contaminant	Factors (kg/tonne of iron produced)
Lead	0.02725 which is the average of the range (0.0045 to 0.05) given in FIRE
Manganese	0.01125
PM	0.45
PM_{10}	0.43

II. Particulate Matter Calculator[6]

The following particle size distribution can be obtained from PM Calculator and is used to derive the emission factor for $PM_{2.5}$.

SCC: 3-04-003-03	
Particle	Particle Size Distribution (PSD)
PM_{10}	0.96
$PM_{2.5}$	0.94

Derived $PM_{2.5}$ emission factor would be:

$EF_{PM_{2.5}} = 0.45 * 0.94 = 0.42$ kg/tonne

III. SPECIATE database[5]

Since there are no VOC emissions in this process, VOC speciation is not necessary. The PM speciation profile for this process is **28201** (Cast Iron Induction Furnace) and the following contaminants' speciation percentages are obtained and used to derive their respective emission factors.

SCC: 3-04-003-03
PM Factor: 0.45 kg/tonne (from FIRE)
PM Profile: 28201
Profile Name: Cast Iron Induction Furnace

Contaminant	% of PM	Derived Emission Factor (kg/tonne)
Aluminum	1.3	0.45 * 1.3 /100 = 0.00585
Arsenic	0.012	0.45 * 0.012 /100 = 0.000054
Bromine	0.021	0.45 * 0.021 /100 = 0.000095
Cadmium	0.012	0.45 * 0.012 /100 = 0.000054
Chlorine	2.5	0.45 * 2.5 /100 = 0.01125
Chromium	0.024	0.45 * 0.024 /100 = 0.000108
Cobalt	0.002	0.45 * 0.002 /100 = 0.000009
Copper	0.12	0.45 * 0.12 /100 = 0.00054
Iron	5.7	0.45 * 5.7 /100 = 0.02565
Nickel	0.098	0.45 * 0.098 /100 = 0.000441
Titanium	0.48	0.45 * 0.48 /100 = 0.00216
Vanadium	0.006	0.45 * 0.006 /100 = 0.000027
Zinc	2.9	0.45 * 2.9 /100 = 0.01305

After gathering the emission factors, the emissions can be estimated by multiplying these factors with the process activity.

Summary of the calculated emission profile

SCC: 3-04-003-03
Description: Grey Iron Foundries/Electric Induction Furnace
Activity, *BQ*: 5,000 tonnes
Control: No Control, all $CE_x = 0$

Contaminant	CAS	Emission Factors EF_x (kg/tonne) ^{note}		Emissions E_x (kg)
Aluminum	7429-90-5	0.00585	S	29
Arsenic	NA - 02	0.00005	S	0.27
Bromine	7726-95-6	0.0001	S	0.47
Cadmium	NA - 03	0.00005	S	0.27
Chlorine	7782-50-5	0.01125	S	56
Chromium	NA - 04	0.000108	S	0.54
Cobalt	NA - 05	0.000009	S	0.05
Copper	NA - 06	0.00054	S	2.7
Iron	7439-89-6	0.02565	S	128
Lead	NA - 08	0.02725	F	136
Manganese	NA - 09	0.01125	F	56
Nickel	NA - 11	0.000441	S	2.2
PM	N/A - M08	0.45	F	2,250
PM_{10}	N/A - M09	0.43	F	2,150
$PM_{2.5}$	N/A - M10	0.42	P	2,100
Titanium	7440-32-6	0.00216	S	11
Vanadium	7440-62-2	0.00003	S	0.14
Zinc	NA - 14	0.01305	S	65

Notes
F = Factors from FIRE
S = Factors from speciation profile
P = Factors from PM Calculator

Reporting Threshold Consideration

Contaminant	CAS	Calculated Emission (kg/yr)	Threshold (kg/yr)	Equal to or Greater than Threshold	Reported Value (kg)
PM	N/A - M08	2,250	20,000 *	No	— BTH
PM_{10}	N/A - M09	2,150	500 *	✔	2,150
$PM_{2.5}$	N/A - M10	2,100	300 *	✔	2,100

* MOE release based threshold (Table 2A)

— BTH means below reporting threshold.

Foundry F must report its emissions of PM_{10} and $PM_{2.5}$ since its facility emissions of each of these contaminants exceed the reporting thresholds for these contaminants. For a contaminant whose emissions do not exceed its reporting threshold, the contaminant name has to be reported and identified with assigned codes indicating that the emission is below the reporting threshold or that there is no emission reportable.

Appendix A.7 Calculation of Annual Emissions Using an Emission Estimation Model

Plant G is a ready mix concrete batching facility with 500 metres (0.5 kilometre) of unpaved roadway and an average daily traffic volume of 50 trucks (each truck weighs 20 tonnes and has 6 wheels). *Plant G* operated only 240 days in a given year.

To calculate the fugitive emissions from the unpaved road, an emission estimation algorithm can be used. USEPA has an empirical equation used in calculating the quantity in kilograms (kg) of size specific particulate emissions from an unpaved road per vehicle kilometre travelled (VKMT) (refer to AP-42[3], chapter 13, Section 2.2 for details). The EPA empirical equation for the unpaved road is adopted and converted to SI units (International System of Units) as follows:

$$EF = \frac{k(s/12)^a (W/3)^b}{(M/0.2)^c}$$

Where EF = Size-specific emission factor, kg/VKMT
s = Surface material silt content, %
W = Mean vehicle weight, tonnes
M = Surface material moisture content, %

and

Constant	$PM_{2.5}$	PM_{10}	PM
k (kg/VKMT)	0.111	0.76	2.96
a	0.8	0.8	0.8
b	0.4	0.4	0.5
c	0.3	0.3	0.4

Range of Source Conditions Required to Apply the Above Equation						
Surface Silt Content, %	Mean Vehicle Weight		Mean Vehicle Speed		Mean No. of Wheels	Surface Moisture Content, %
	Mg	ton	km/hr	mph		
1.2 - 35	1.4 - 260	1.5 - 290	8 - 88	5 - 55	4 - 7	0.03 - 20

To apply the above equation for *Plant G*, the following parameters must be determined first.

Vehicle kilometres travelled on the unpaved road within the facility (VKMT) in a given year:

VKMT = no. of trucks/day * length of unpaved road * # operating days/year * 2 ← in/out traffic
= 50 * 0.5 * 240 * 2 = 12,000 VKMT

Mean vehicle weight (W) = 20 tonnes

Plant G's unpaved roadway has the following characteristics:

Silt content (s) = 5 %
Moisture content (M) = 10 % (assume moderate season with normal precipitation)

The calculated emission rates are :

$$EF_{PM} = \frac{2.96(5/12)^{0.8}(20/3)^{0.5}}{(10/0.2)^{0.4}} = 0.7933\ kg\ PM / vkmt$$

$$EF_{PM_{10}} = \frac{0.762(5/12)^{0.8}(20/3)^{0.4}}{(10/0.2)^{0.3}} = 0.2498\ kg\ PM_{10} / vkmt$$

$$EF_{PM_{2.5}} = \frac{0.111(5/12)^{0.8}(20/3)^{0.4}}{(10/0.2)^{0.3}} = 0.0364\ kg\ PM_{2.5} / vkmt$$

The corresponding annual emission estimates are :

$$\boldsymbol{E_x = VKMT * EF_x}$$

Where E_x = Emission of contaminant *x*, kg/year
VKMT = Annual vehicle kilometres travelled, km
EF_x = Emission factor of contaminant *x*, kg/VKMT

PM emission	= 12,000 * 0.7933	= 9,519 kg/yr
PM_{10} emission	= 12,000 * 0.2498	= 2,998 kg/yr
$PM_{2.5}$ emission	= 12,000 * 0.0364	= 437 kg/yr

Reporting Threshold Consideration

Contaminant	CAS	Calculated Emission (kg/yr)	Threshold (kg/yr)	Equal to or Greater than Threshold	Reported Value (kg)
PM	N/A - M08	9,519	20,000 *	No	— BTH
PM_{10}	N/A - M09	2,998	500 *	✔	2,998
$PM_{2.5}$	N/A - M10	437	300 *	✔	437

* MOE release based threshold (Table 2A)
— BTH means below reporting threshold.

Plant G must report its emissions of PM_{10} and $PM_{2.5}$ since its facility emissions of each of these contaminants exceed the reporting thresholds for these contaminants. For a contaminant whose emissions do not exceed its reporting threshold, the contaminant name has to be reported and identified with assigned codes indicating that the emission is below the reporting threshold or that there is no emission reportable.

Appendix A.8 Reporting Polycyclic Aromatic Hydrocarbons (PAH) Emissions

Company H has two combustion sources that are emitting Polycyclic Aromatic Hydrocarbons (PAHs). Emissions from each combustion source are exhausted directly to the atmosphere through separate stacks. Emission measurements were performed at the stacks each year.

Approach (using source testing method)

Step 1. Obtain Test Results

Stack 1 test result

Contaminant	CAS	Emission Rate, Er (microgram/sec)
PAH - Acenaphthene	83-32-9	100
PAH - Anthracene	120-12-7	200
PAH - Benzo(a)pyrene	50-32-8	2
PAH - Benzo(g,h,i)perylene	191-24-2	15
PAH - Fluoranthene	206-44-0	400
PAH - Phenanthrene	85-1-8	1,000

Note : Measurements are at normal loading capacity.

Stack 2 test result

Contaminant	CAS	Emission Rate, Er (microgram/sec)
PAH - Acenaphthylene	208-96-8	200
PAH - Anthracene	120-12-7	150
PAH - Benzo(a)phenanthrene (Chrysene)	218-1-9	40
PAH - Benzo(a)pyrene	50-32-8	10
PAH - Benzo(g,h,i)perylene	191-24-2	20
PAH - Fluoranthene	206-44-0	500
PAH - Indeno(1,2,3-c,d)pyrene	193-39-5	3
PAH - Perylene	198-55-0	0.3
PAH - Phenanthrene	85-1-8	2,000

Step 2. Calculate Emissions

If the two combustion sources operated for 24 hours each day and 360 days within the reporting year.

$$Annual\ Emission\ (kg/yr) = Er\ (\mu g/s) * \frac{360 * 24 * 3{,}600}{10^9}$$

Summary of the calculated emission profile

Contaminant	CAS	Calculated Emission (kg/yr)		
		Stack 1	Stack 2	Combined
PAH - Acenaphthene	83-32-9	3.11		3.11
PAH - Acenaphthylene	208-96-8		6.22	6.22
PAH - Anthracene	120-12-7	6.22	4.67	10.89
PAH - Benzo(a)phenanthrene (Chrysene)	218-1-9		1.24	1.24
PAH - Benzo(a)pyrene	50-32-8	0.06	0.31	0.37
PAH - Benzo(g,h,i)perylene	191-24-2	0.47	0.62	1.09
PAH - Fluoranthene	206-44-0	12.44	15.55	27.99
PAH - Indeno(1,2,3-c,d)pyrene	193-39-5		0.09	0.09
PAH - Perylene	198-55-0		0.009	0.009
PAH - Phenantrene	85-1-8	31.1	62.21	93.31

Reporting Threshold Consideration 1

Contaminant	CAS	Calculated MPO Quantity (kg/yr)			Equal to or Greater than MOE MPO Threshold of 5 kg/yr **	Reported Value (kg)
		Stack 1	Stack 2	Combined		
PAH - Acenaphthene	83-32-9	3.11		3.11	No	— BTH
PAH - Acenaphthylene	208-96-8		6.22	6.22	✔	6.22

** MOE MPO based threshold (Table 2B)
— BTH means below reporting threshold.

Company H is not required to proceed to calculate and report the emissions of Acenaphthene to air since its MPO threshold was not exceeded. However, *Company H* is required to proceed to calculate and report the emissions of Acenaphthylene to air since its MPO threshold was exceeded.

Reporting Threshold Consideration 2

Contaminant	CAS	Calculated Emission (kg/yr)			Exceed NPRI Alternate Threshold of total 50 kg/yr ****	Reported Value (kg)
		Stack 1	Stack 2	Combined		
PAH - Benzo(a)phenanthrene (Chrysene)	218-1-9		1.24	1.24		1.24
PAH - Benzo(a)pyrene	50-32-8	0.06	0.31	0.37		0.37
PAH - Benzo(g,h,i)perylene	191-24-2	0.47	0.62	1.09		1.09
PAH - Fluoranthene	206-44-0	12.44	15.55	27.99		27.99
PAH - Indeno(1,2,3-c,d)pyrene	193-39-5		0.09	0.09		0.09
PAH - Perylene	198-55-0		0.009	0.009		0.009
PAH - Phenantrene	85-1-8	31.1	62.21	93.31		93.31
TOTAL				124	✔	report all

**** NPRI alternate threshold (Table 2C)

Since these PAHs are subjected to NPRI's alternate threshold requirement, NPRI's reporting guideline should be consulted. The 50 kg/yr threshold applies to total quantity of contaminants released and transferred.

Reporting Threshold Consideration 3

Company H determined that the amount of Anthracene MPO (including by-products) is less than the 10 tonnes MPO threshold and is not required to proceed to calculate and report the contaminant emissions. (Anthracene is a Table 2C contaminant).

Appendix A.9 Estimation of Annual Emissions for Portable Facilities

The following example shows the general approach in using the emission factors method to calculate emissions from Company I. It should be noted that emissions of all the contaminants in the emission profile are calculated and shown here for completeness. The facility should be aware that emission calculations of any of the Table 2B and 2C contaminants are required only if they meet their respective MPO requirement.

Company I is a **portable Hot Mix Asphalt facility** producing 75,000 tonnes of asphalt in a given reporting year. The portable facility operated 8 months in the Sarnia area and the remaining 4 months in Walford. The company has identified the following three emission contributing sources:

1. A #2 Oil fired drum type dryer, 5 million BTU/hr capacity
   (equipped with a baghouse for controlling particulate emissions)
2. Storage Piles
3. Haul Road (unpaved road)

Since *Company I* operates a dryer which uses #2 Oil as the fuel input and has a rated energy input capacity of 5 million BTU/hr, it meets one of the reporting criteria [refer to Section 2.2(2) of the Guideline] and must calculate and report emissions of Table 2A contaminants. *Company I* has to (i) calculate the emissions of applicable contaminants listed in Table 2A and compare against the respective contaminant reporting thresholds; and (ii) evaluate the MPO quantities of applicable contaminants listed in Tables 2B and 2C, and calculate the emissions for the contaminants that meet their respective MPO requirements.

The operating conditions of *Company I* for the two locations are as follows:

Company : K		
Operation Location	Sarnia	Walford
Period of Operation	January to August	September to December
Tonnes of Asphalt produced	50,000 tonnes	25,000 tonnes
Storage piles	20,000 tonnes	10,000 tonnes
Cold Aggregate Handing	46,000 tonnes	23,000 tonnes
Length of Unpaved Road within Facilities	0.4 km	0.33 km
Total Traffic per Operating Period	3,500	1,500
Total VKMT Travelled on Unpaved Road (per operating period)	2,750	1,000
Silt Content	5	5
Moisture %	10	10

The Emission Factors method (refer to example A.6) was used by this company to calculate emissions. Emission factor information was obtained from FIRE database[2], AP-42[3], and the particle size distribution (PSD) from PM Calculator[6]. The corresponding emission calculation approach is as follows:

Summary of the calculated emission profile

SCC	3-05-002-58					
DESCRIPTION	Minerals/Asphalt Concrete Rotary Drum Dryer/Mixer, Oil-fired					
Location				Sarnia	Walford	TOTAL
Production, tonnes				50,000	25,000	75,000
Contaminant	CAS	Emission Factor (kg/tonnes) (and reference)		Calculated Emission (kg)		
Arsenic	7440-38-2	0.00000055	AP-42	0.0275	0.01375	0.04125
Acetaldehyde	75-07-0	0.00065	AP-42	32.5	16.25	48.75
Acetone	67-64-1	0.00042	AP-42	21	10.5	31.5
Acrolein	107-02-8	0.000013	AP-42	0.65	0.325	0.975
Benzene	71-43-2	0.0002	AP-42	10	5	15
Cadmium	7440-43-9	0.00000022	AP-42	0.011	0.0055	0.0165
Carbon Dioxide	124-38-9	19	AP-42	950,000	475,000	1,425,000
Carbon Monoxide	630-8-0	0.018	AP-42	900	450	1350
Chromium	7440-47-3	0.000006	AP-42	0.3	0.15	0.45
Copper	7440-50-8	0.0000031	AP-42	0.155	0.0775	0.2325
Ethylbenzene	100-41-4	0.00019	AP-42	9.5	4.75	14.25
Formaldehyde	50-00-0	0.0012	AP-42	60	30	90
Lead	7439-92-1	0.0000017	AP-42	0.085	0.0425	0.1275
Manganese	7439-96-5	0.0000055	AP-42	0.275	0.1375	0.4125
Mercury	7439-97-6	0.0000000037	AP-42	0.000185	0.000093	0.000278
Methane	74-82-8	0.0096	AP-42	480	240	720
Methyl Ethyl Ketone	78-93-3	0.00001	AP-42	0.5	0.25	0.75
Nickel	7440-2-0	0.0000075	AP-42	0.375	0.1875	0.5625
Oxides of Nitrogen (as NO_2)	10102-44-0	0.0375	AP-42	1,875	938	2,813
PAH - Acenaphthylene	208-96-8	0.000011	AP-42	0.55	0.275	0.825
PAH - Anthracene	120-12-7	0.0000018	AP-42	0.09	0.045	0.135
PAH - Fluorene	86-73-7	0.0000085	AP-42	0.425	0.2125	0.6375
PAH - Phenanthrene	85-01-8	0.000028	AP-42	1.4	0.7	2.1
PAH - Pyrene	129-00-0	0.0000015	AP-42	0.075	0.0375	0.1125
PM	N/A - M08	0.02	AP-42	1,000	500	1,500
PM_{10}	N/A - M09	0.015	AP-42	750	375	1,125
$PM_{2.5}$	N/A - M10	0.0052	AP-42+PSD	260	130	390
Propionaldehyde	123-38-6	0.000065	AP-42	3.25	1.625	4.875
Quinone	106-51-4	0.00008	AP-42	4	2	6
Silver	7440-22-4	0.0000007	AP-42	0.035	0.0175	0.0525
Sulphur Dioxide	7446-09-5	0.028	AP-42	1,400	700	2,100
Toluene	108-88-3	0.00037	AP-42	18.5	9.25	27.75
VOC	N/A - M16	0.0345	AP-42	1,725	863	2,588
Xylene	1330-20-7	0.000082	AP-42	4.1	2.05	6.15
Zinc	7440-66-6	0.000021	AP-42	1.05	0.525	1.575

Summary of the calculated emission profile

SCC	3-05-002-03					
DESCRIPTION	Minerals/Asphalt Concrete Storage Piles					
Location				Sarnia	Walford	TOTAL
Quantity, tonnes				20,000	10,000	30,000
Contaminant	CAS	Emission Factor (kg/tonnes) (and reference)		Calculated Emission (kg)		
PM	N/A - M08	0.17	FIRE + PSD	3,400	1,700	5,100
PM_{10}	N/A - M09	0.06	FIRE	1,200	600	1,800
$PM_{2.5}$	N/A - M10	0.019	FIRE + PSD	380	190	570

Summary of the calculated emission profile

SCC	3-05-002-90					
DESCRIPTION	Minerals/Asphalt Concrete Haul Roads-General (Road Dust)					
Location				Sarnia	Walford	TOTAL
Vehicle Kilometre Travelled (VKMT)				2,750	1,000	3,750
Contaminant	CAS	Emission Factor (kg/VKMT) (and reference)		Calculated Emission (kg)		
PM	N/A - M08	2.39	AP-42	6,573	2,390	8,963
PM_{10}	N/A - M09	0.51	AP-42	1,403	510	1,913
$PM_{2.5}$	N/A - M10	0.074	AP-42	203.5	74	277.5

Calculation of the unpaved road emission is based on the USEPA unpaved road emission estimation equation. Please see example A.7 for reference.

Summary of the calculated emission profile
(Total of emissions from above three processes: 3-05-002-58, 3-05-002-03, 3-05-002-90)

Total Emission for Portable Facility (Two Locations)				
Contaminant	CAS	Calculated Emission (kg)		
		Sarnia	Walford	Total
Acetaldehyde	75-07-0	32.5	16.25	48.75
Acetone	67-64-1	21	10.5	31.5
Acrolein	107-02-8	0.65	0.325	0.975
Arsenic	NA - 02	0.0275	0.01375	0.04125
Benzene	71-43-2	10	5	15
Cadmium	NA - 03	0.011	0.0055	0.0165
Carbon Dioxide	124-38-9	950,000	475,000	1,425,000
Carbon Monoxide	630-8-0	900	450	1350
Chromium	NA - 04	0.3	0.15	0.45
Copper	NA - 06	0.155	0.0775	0.2325
Ethylbenzene	100-41-4	9.5	4.75	14.25
Formaldehyde	50-00-0	60	30	90
Lead	NA - 08	0.085	0.0425	0.1275
Manganese	NA - 09	0.275	0.1375	0.4125
Mercury	NA - 10	0.000185	0.000093	0.000278
Methane	74-82-8	480	240	720
Methyl Ethyl Ketone	78-93-3	0.5	0.25	0.75
Nickel	NA - 11	0.375	0.1875	0.5625
Oxides of Nitrogen (as NO)^{note}	10102-43-9	1225	612.5	1,837.5
PAH - Acenaphthylene	208-96-8	0.55	0.275	0.825
PAH - Anthracene	120-12-7	0.09	0.045	0.135
PAH - Fluorene	86-73-7	0.425	0.2125	0.6375
PAH - Phenanthrene	85-01-8	1.4	0.7	2.1
PAH - Pyrene	129-00-0	0.075	0.0375	0.1125
PM	N/A - M08	10,973	4,590	15,563
PM_{10}	N/A - M09	3,353	1,485	4,838
$PM_{2.5}$	N/A - M10	843	394	1,237
Propionaldehyde	123-38-6	3.25	1.625	4.875
Quinone	106-51-4	4	2	6
Silver	NA - 13	0.035	0.0175	0.0525
Sulphur Dioxide	7446-09-5	1,400	700	2,100
Toluene	108-88-3	18.5	9.25	27.75
VOC	N/A - M16	1,725	863	2,588
Xylene	1330-20-7	4.1	2.05	6.15
Zinc	NA -14	1.05	0.525	1.575

Note The calculated oxides of nitrogen emission from AP-42 factors is expressed as NO_2. This value is multiplied by 0.6522 to obtain the reported oxides of nitrogen emissions as NO.

Reporting Threshold Consideration

Total Emission for Portable Facility (Two Locations)					
Contaminant	CAS	Calculated Emission (kg/yr)	Threshold (kg/yr)	Equal to or Greater than Threshold	Reported Value (kg)
Carbon Dioxide	124-38-9	1,425,000	100,000,000 *	No	— BTH
Carbon Monoxide	630-8-0	1350	20,000 *	No	— BTH
Oxides of Nitrogen (as NO)[note]	10102-43-9	1,837.5	14,000 *	No	— BTH
PM	N/A - M08	15,563	20,000 *	No	— BTH
PM_{10}	N/A - M09	4,838	500 *	✓	4,838
$PM_{2.5}$	N/A - M10	1,237	300 *	✓	1,237
Sulphur Dioxide	7446-09-5	2,100	20,000 *	No	— BTH
VOC	N/A - M16	2,588	10,000 *	No	— BTH

Note The calculated oxides of nitrogen emissions from AP-42 factors are expressed as NO_2. This value is multiplied by 0.6522 to obtain the reported oxides of nitrogen emission expressed as NO.

* MOE release based threshold (Table 2A)

— BTH means below reporting threshold.

Company I must report its emissions of PM_{10} and $PM_{2.5}$ since its facility emissions of each of these contaminants exceed the reporting thresholds for these contaminants. For a contaminant whose emissions do not exceed its reporting threshold, the contaminant name has to be reported and identified with assigned codes indicating that the emission is below the reporting threshold or that there is no emission reportable.

Reporting Threshold Consideration 1 of PAH

Contaminant	CAS	Calculated MPO Quantity (kg/yr)	Equal to or Greater than MOE MPO Threshold of 5 kg/yr **	Reported Value (kg)
PAH - Acenaphthylene	208-96-8	0.825	No	— BTH
PAH - Fluorene	86-73-7	0.638	No	— BTH

** MOE MPO based threshold (Table 2B)

— BTH means below reporting threshold.

Company I is not required to proceed to calculate and report the emissions of Acenaphthylene or Fluorene to air since their respective MPO thresholds were not exceeded.

Reporting Threshold Consideration 2 of PAH

Total Emission for Portable Facility (Two Locations)				
Contaminant	CAS	Calculated Emission (kg/yr)	Exceed NPRI Alternate Threshold of total 50 kg/yr ****	Reported Value (kg)
PAH - Phenanthrene	85-01-8	2.1		
PAH - Pyrene	129-00-0	0.1125		
TOTAL		2.2	No	---

**** NPRI alternate threshold (Table 2C)

Since these PAHs are subjected to NPRI's alternate threshold requirement, NPRI's reporting guideline should be consulted. The 50 kg/yr threshold applies to total quantity of contaminants released and transferred.

Reporting Threshold Consideration 3 of PAH

Company / determined that the amount of Anthracene MPO (including by-products) is less than the 10 tonnes MPO threshold and is not required to proceed to calculate and report the contaminant emissions. (Anthracene is a Table 2C contaminant).

Appendix A.10 Calculation of Annual Emissions from an Office Building

Commercial buildings are required to report SO_2, NO_x, CFCs, HFCs and HCFCs emissions only.

Office Building J uses two natural gas boilers for providing space heating for the building in cold winter months and hot water throughout the year. The following example shows the general approach in using the emission factors method to calculate emissions from *Office Building J*. It should be noted that emissions of all the contaminants in the emission profile are calculated and shown here for completeness.

Boiler #1:	100 million BTU/hr
Boiler #2:	100 million BTU/hr
Annual fuel consumption	20,000,000 m^3 natural gas (from gas bills)

Apportionment of fuel consumption to the two boilers (estimation)

Boiler #1:	12,000,000 m^3
Boiler #2:	8,000,000 m^3

The emission factors for a natural gas-fired boiler are available from AP-42[3] (Chapter 1 Section 4) and are tabulated below:

Emissions Calculation using AP-42[3] Factors

Summary of the calculated emission profile

SCC	1-03-006-02			
DESCRIPTION	External Combustion Boilers/Commercial/Institutional Natural Gas, 10 - 100 million BTU/hr			
Annual Natural Gas Consumption, m^3	20,000,000			
converted to million cu.ft.	706.3			
Contaminant	CAS	Emission Factor (lb/million cu.ft.) (and reference)		Calculated Emission (kg)
Arsenic	7440-38-2	0.0002	AP-42	0.064
Benzene	71-43-2	0.0021	AP-42	0.672
Beryllium	7440-41-7	< 0.000012	AP-42	< 0.00384
Cadmium	7440-43-9	0.0011	AP-42	0.352
Carbon Dioxide	124-38-9	120,000	AP-42	38,400,000
Carbon Monoxide	630-8-0	84	AP-42	26,900
Chromium	7440-47-3	0.0014	AP-42	0.448
Cobalt	7440-48-4	0.000084	AP-42	0.02688
Copper	7440-50-8	0.00085	AP-42	0.272
Formaldehyde	50-00-0	0.075	AP-42	24
Hexane	110-54-3	1.8	AP-42	577
Lead	7439-92-1	0.0005	AP-42	0.16
Manganese	7439-96-5	0.00038	AP-42	0.1216
Mercury	7439-97-6	0.00026	AP-42	0.0832
Methane	74-82-8	2.3	AP-42	737
Nickel	7440-02-0	0.0021	AP-42	0.672
Naphthalene	91-20-3	0.00061	AP-42	0.1952
Nitrous Oxide	10024-97-2	2.2	AP-42	705
Oxides of Nitrogen (as NO_2)	10102-44-0	100	AP-42	32,000

Contaminant	CAS	Emission Factor (lb/million cu.ft.) (and reference)		Calculated Emission (kg)
PAH - Acenaphthene	83-32-9	< 0.0000018	AP-42	< 0.000576
PAH - Acenaphthylene	208-96-8	< 0.0000018	AP-42	< 0.000576
PAH - Anthracene	120-12-7	< 0.0000024	AP-42	< 0.000768
PAH - Benz(a)anthracene	56-55-3	< 0.0000018	AP-42	< 0.000576
PAH - Benzo(a)phenanthrene (Chrysene)	218-01-9	< 0.0000018	AP-42	< 0.000576
PAH - Benzo(a)pyrene	50-32-8	< 0.0000012	AP-42	< 0.000384
PAH - Benzo(b)fluoranthene	205-99-2	< 0.0000018	AP-42	< 0.000576
PAH - Benzo(g,h,i)perylene	191-24-2	< 0.0000012	AP-42	< 0.000384
PAH - Benzo(k)fluoranthene	207-08-9	< 0.0000018	AP-42	< 0.000576
PAH - Dibenzo(a,h)anthracene	53-70-3	< 0.0000012	AP-42	< 0.000384
PAH - Fluoranthene	206-44-0	0.000003	AP-42	0.00096
PAH - Fluorene	86-73-7	0.000003	AP-42	0.00096
PAH - Indeno(1,2,3-cd)pyrene	193-39-5	< 0.0000018	AP-42	< 0.000576
PAH - Phenanathrene	85-01-8	0.000017	AP-42	0.00544
PAH - Pyrene	129-00-0	0.000005	AP-42	0.0016
PM	N/A - M08	7.6	AP-42	2,435
PM_{10}	N/A - M09	7.6	AP-42	2,435
$PM_{2.5}$	N/A - M10	7.6	AP-42	2,435
Selenium	7782-49-2	< 0.000024	AP-42	< 0.00768
Sulphur Dioxide	7446-09-5	0.6	AP-42	192
Toluene	108-88-3	0.0034	AP-42	1.088
Vanadium	7440-62-2	0.0023	AP-42	0.736
VOC	N/A - M16	5.5	AP-42	1,761
Zinc	7440-66-6	0.029	AP-42	9.28

Reporting Threshold Consideration

Contaminant	CAS	Calculated Emission, (kg/yr)	Reporting Threshold (kg/yr)	Equal to or Greater than Threshold	Reported Value (kg)
Oxides of Nitrogen (as NO)^{note}	10102-43-9	20,870	14,000 *	✔	20,870
Sulphur Dioxide	7446-09-5	192	20,000 *	No	— BTH

Note The calculated oxides of nitrogen emission from AP-42 factors is expressed as NO_2. This value is multiplied by 0.6522 to obtain the reported oxides of nitrogen emission expressed as NO.

* MOE release based threshold (Table 2A)

— BTH means below reporting threshold.

Office Building J must report its oxides of nitrogen (as NO) emissions since its facility emissions of oxides of nitrogen (as NO) exceed the reporting threshold for this contaminant. For a contaminant whose emissions do not exceed its reporting threshold, the contaminant name has to be reported and identified with assigned codes indicating that the emission is below the reporting threshold or that there is no emission reportable.

Appendix B

Reportable Contaminants from Fuel Combustion

(For Information Only)

APPENDIX B

REPORTABLE CONTAMINANTS FROM FUEL COMBUSTION

(This information is extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Anthracite Coal Combustion

Contaminant	CAS
ACENAPHTHENE	83-32-9
ACENAPHTHYLENE	208-96-8
ACETYLENE	74-86-2
ALUMINUM	7429-90-5
ANTHRACENE	120-12-7
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZ(A)ANTHRACENE	56-55-3
BENZENE	71-43-2
BENZO(A)PHENANTHRENE (CHRYSENE)	218-01-9
BENZO(A)PYRENE	50-32-8
BENZO(E)PYRENE	192-97-2
BENZO(G,H,I)PERYLENE	191-24-2
BENZO(K)FLUORANTHENE	207-08-9
BERYLLIUM	7440-41-7
BIPHENYL	92-52-4
CADMIUM	NA - 03
CARBON DIOXIDE	124-38-9
CARBON MONOXIDE	630-08-0
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
ETHYLBENZENE	100-41-4
FLUORANTHENE	206-44-0
FLUORENE	86-73-7
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
INDENO(1,2,3-C,D)PYRENE	193-39-5
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10

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REPORTABLE CONTAMINANTS FROM FUEL COMBUSTION

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Anthracite Coal Combustion

Contaminant	CAS
METHANE	74-82-8
NAPHTHALENE	91-20-3
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PERYLENE	198-55-0
PHENANTHRENE	85-01-8
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
PROPYLENE	115-07-1
PYRENE	129-00-0
SELENIUM	NA - 12
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (TEQ)	1746-01-6
2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	51207-31-9
TIN	7440-31-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
M-XYLENE	108-38-3
O-XYLENE	95-47-6
ZINC	NA - 14

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Bituminous/Subbituminous Coal Combustion

Contaminant	CAS
ACENAPHTHENE	83-32-9
ACENAPHTHYLENE	208-96-8
ACETALDEHYDE	75-07-0
ACETOPHENONE	98-86-2
ACETYLENE	74-86-2
ACROLEIN	107-02-8
ALUMINUM	7429-90-5
ANTHRACENE	120-12-7
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZ(A)ANTHRACENE	56-55-3
BENZENE	71-43-2
BENZO(A)PHENANTHRENE (CHRYSENE)	218-01-9
BENZO(A)PYRENE	50-32-8
BENZO(G,H,I)PERYLENE	191-24-2
BENZYL CHLORIDE	100-44-7
BERYLLIUM	7440-41-7
BIPHENYL	92-52-4
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7
BORON	7440-42-8
BROMINE	7726-95-6
BROMOMETHANE	74-83-9
CADMIUM	NA - 03
CARBON DISULPHIDE	75-15-0
CARBON MONOXIDE	630-08-0
CHLORINE	7782-50-5
CHLOROBENZENE	108-90-7
CHLOROETHANE	75-00-3
CHLOROFORM	67-66-3
CHLOROMETHANE	74-87-3
CHROMIUM	NA - 04
CHROMIUM (VI) COMPOUNDS	18540-29-9
COBALT	NA - 05

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REPORTABLE CONTAMINANTS FROM FUEL COMBUSTION

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Bituminous/Subbituminous Coal Combustion

Contaminant	CAS
COPPER	NA - 06
CUMENE	98-82-8
1,2-DIBROMOETHANE	106-93-4
1,2-DICHLOROETHANE	107-06-2
DICHLOROMETHANE	75-09-2
DIMETHYL SULPHATE	77-78-1
2,4-DINITROTOLUENE	121-14-2
ETHYLBENZENE	100-41-4
FLUORANTHENE	206-44-0
FLUORENE	86-73-7
FLUORINE	7782-41-4
FORMALDEHYDE	50-00-0
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
HYDROCHLORIC ACID	7647-01-0
HYDROGEN FLUORIDE	7664-39-3
INDENO(1,2,3-C,D)PYRENE	193-39-5
IRON	7439-89-6
LEAD	NA - 08
LITHIUM - OTHER THAN HYDRIDES	7439-93-2
MANGANESE	NA - 09
MERCURY	NA - 10
METHANE	74-82-8
METHYL ETHYL KETONE	78-93-3
METHYL METHACRYLATE	80-62-6
METHYL TERT-BUTYL ETHER	1634-04-4
NAPHTHALENE	91-20-3
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
NITROUS OXIDE	10024-97-2
PHENANTHRENE	85-01-8
PHENOL	108-95-2
PHOSPHORUS	7723-14-0

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Bituminous/Subbituminous Coal Combustion

Contaminant	CAS
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
PROPIONALDEHYDE	123-38-6
PROPYLENE	115-07-1
PYRENE	129-00-0
SELENIUM	NA - 12
SILVER	NA - 13
STYRENE	100-42-5
SULPHUR DIOXIDE	7446-09-5
2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (TEQ)	1746-01-6
2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	51207-31-9
TETRACHLOROETHYLENE	127-18-4
TIN	7440-31-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
VANADIUM	7440-62-2
VINYL ACETATE	108-05-4
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
M-XYLENE	108-38-3
O-XYLENE	95-47-6
ZINC	NA - 14

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REPORTABLE CONTAMINANTS FROM FUEL COMBUSTION

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Lignite Coal Combustion

Contaminant	CAS
ACENAPHTHENE	83-32-9
ACENAPHTHYLENE	208-96-8
ACETALDEHYDE	75-07-0
ACETOPHENONE	98-86-2
ACETYLENE	74-86-2
ACROLEIN	107-02-8
ALUMINUM	7429-90-5
ANTHRACENE	120-12-7
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZ(A)ANTHRACENE	56-55-3
BENZENE	71-43-2
BENZO(A)PHENANTHRENE (CHRYSENE)	218-01-9
BENZO(A)PYRENE	50-32-8
BENZO(G,H,I)PERYLENE	191-24-2
BENZYL CHLORIDE	100-44-7
BERYLLIUM	7440-41-7
BIPHENYL	92-52-4
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7
BROMOMETHANE	74-83-9
CADMIUM	NA - 03
CARBON DIOXIDE	124-38-9
CARBON DISULPHIDE	75-15-0
CARBON MONOXIDE	630-08-0
CHLORINE	7782-50-5
CHLOROBENZENE	108-90-7
CHLOROETHANE	75-00-3
CHLOROFORM	67-66-3
CHLOROMETHANE	74-87-3
CHROMIUM	NA - 04
CHROMIUM (VI) COMPOUNDS	18540-29-9
COBALT	NA - 05
COPPER	NA - 06

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Lignite Coal Combustion

Contaminant	CAS
CUMENE	98-82-8
1,2-DIBROMOETHANE	106-93-4
1,2-DICHLOROETHANE	107-06-2
DICHLOROMETHANE	75-09-2
DIMETHYL SULPHATE	77-78-1
2,4-DINITROTOLUENE	121-14-2
ETHYLBENZENE	100-41-4
FLUORANTHENE	206-44-0
FLUORENE	86-73-7
FORMALDEHYDE	50-00-0
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
HYDROCHLORIC ACID	7647-01-0
HYDROGEN FLUORIDE	7664-39-3
INDENO(1,2,3-C,D)PYRENE	193-39-5
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
METHYL ETHYL KETONE	78-93-3
METHYL METHACRYLATE	80-62-6
METHYL TERT-BUTYL ETHER	1634-04-4
NAPHTHALENE	91-20-3
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
NITROUS OXIDE	10024-97-2
PHENANTHRENE	85-01-8
PHENOL	108-95-2
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PROPIONALDEHYDE	123-38-6

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Lignite Coal Combustion

Contaminant	CAS
PROPYLENE	115-07-1
PYRENE	129-00-0
SELENIUM	NA - 12
SILVER	NA - 13
STYRENE	100-42-5
SULPHUR DIOXIDE	7446-09-5
TETRACHLOROETHYLENE	127-18-4
TIN	7440-31-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
VANADIUM	7440-62-2
VINYL ACETATE	108-05-4
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
M-XYLENE	108-38-3
O-XYLENE	95-47-6
ZINC	NA - 14

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Liquid/Solid Waste Combustion

Contaminant	CAS
ACENAPHTHENE	83-32-9
ACENAPHTHYLENE	208-96-8
ACETALDEHYDE	75-07-0
ACETONE	67-64-1
ACROLEIN	107-02-8
ALUMINUM	7429-90-5
ANTHRACENE	120-12-7
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZ(A)ANTHRACENE	56-55-3
BENZENE	71-43-2
BENZO(A)PHENANTHRENE (CHRYSENE)	218-01-9
BENZO(A)PYRENE	50-32-8
BENZO(E)PYRENE	192-97-2
BENZO(G,H,I)PERYLENE	191-24-2
BENZO(K)FLUORANTHENE	207-08-9
BERYLLIUM	7440-41-7
BORON	7440-42-8
BROMINE	7726-95-6
CADMIUM	NA - 03
CARBON DIOXIDE	124-38-9
CARBON MONOXIDE	630-08-0
CARBON TETRACHLORIDE	56-23-5
CHLORINE	7782-50-5
CHLOROFORM	67-66-3
CHROMIUM	NA - 04
CHROMIUM (VI) COMPOUNDS	18540-29-9
COBALT	NA - 05
COPPER	NA - 06
DIBENZO(A,H)ANTHRACENE	53-70-3
ETHYLENE	74-85-1
FLUORANTHENE	206-44-0
FLUORENE	86-73-7

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Liquid/Solid Waste Combustion

Contaminant	CAS
FLUORINE	7782-41-4
FORMALDEHYDE	50-00-0
N-HEXANE	110-54-3
HYDROCHLORIC ACID	7647-01-0
HYDROGEN CYANIDE	74-90-8
INDENO(1,2,3-C,D)PYRENE	193-39-5
IRON	7439-89-6
LEAD	NA - 08
LITHIUM - OTHER THAN HYDRIDES	7439-93-2
MANGANESE	NA - 09
MERCURY	NA - 10
METHANE	74-82-8
NAPHTHALENE	91-20-3
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
P-NITROPHENOL	100-02-7
NITROUS OXIDE	10024-97-2
PERYLENE	198-55-0
PHENANTHRENE	85-01-8
PHENOL	108-95-2
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
PROPYLENE	115-07-1
PYRENE	129-00-0
SELENIUM	NA - 12
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (TEQ)	1746-01-6

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Liquid/Solid Waste Combustion

Contaminant	CAS
2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	51207-31-9
TIN	7440-31-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
ZINC	NA - 14

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Natural Gas Combustion

Contaminant	CAS
ACENAPHTHENE	83-32-9
ACENAPHTHYLENE	208-96-8
ACETALDEHYDE	75-07-0
ACETYLENE	74-86-2
ACROLEIN	107-02-8
AMMONIA (TOTAL)	NA - 16
ANTHRACENE	120-12-7
ARSENIC	NA - 02
BENZ(A)ANTHRACENE	56-55-3
BENZENE	71-43-2
BENZO(A)PHENANTHRENE (CHRYSENE)	218-01-9
BENZO(A)PYRENE	50-32-8
BENZO(B)FLUORANTHENE	205-99-2
BENZO(G,H,I)PERYLENE	191-24-2
BENZO(K)FLUORANTHENE	207-08-9
BERYLLIUM	7440-41-7
BROMINE	7726-95-6
CADMIUM	NA - 03
CARBON DIOXIDE	124-38-9
CARBON MONOXIDE	630-08-0
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
CYCLOHEXANE	110-82-7
DIBENZO(A,H)ANTHRACENE	53-70-3
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
FLUORANTHENE	206-44-0
FLUORENE	86-73-7
FORMALDEHYDE	50-00-0
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
INDENO(1,2,3-C,D)PYRENE	193-39-5

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Natural Gas Combustion

Contaminant	CAS
IRON	7439-89-6
ISOBUTYRALDEHYDE	78-84-2
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
METHANE	74-82-8
NAPHTHALENE	91-20-3
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
NITROUS OXIDE	10024-97-2
PHENANTHRENE	85-01-8
PHENOL	108-95-2
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PROPYLENE	115-07-1
PYRENE	129-00-0
SELENIUM	NA - 12
SULPHUR DIOXIDE	7446-09-5
TOLUENE	108-88-3
1,2,4-TRIMETHYLBENZENE	95-63-6
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
M-XYLENE	108-38-3
O-XYLENE	95-47-6
ZINC	NA - 14

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Oil Combustion

Contaminant	CAS
ACENAPHTHENE	83-32-9
ACENAPHTHYLENE	208-96-8
ACETALDEHYDE	75-07-0
ACETONE	67-64-1
ACETYLENE	74-86-2
ACROLEIN	107-02-8
ALUMINUM	7429-90-5
ANTHRACENE	120-12-7
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZ(A)ANTHRACENE	56-55-3
BENZENE	71-43-2
BENZO(A)PHENANTHRENE (CHRYSENE)	218-01-9
BENZO(A)PYRENE	50-32-8
BENZO(B)FLUORANTHENE	205-99-2
BENZO(G,H,I)PERYLENE	191-24-2
BENZO(K)FLUORANTHENE	207-08-9
BERYLLIUM	7440-41-7
BORON	7440-42-8
BROMINE	7726-95-6
1,3-BUTADIENE	106-99-0
CADMIUM	NA - 03
CARBON DIOXIDE	124-38-9
CARBON MONOXIDE	630-08-0
CHLORINE	7782-50-5
CHROMIUM	NA - 04
CHROMIUM (VI) COMPOUNDS	18540-29-9
COBALT	NA - 05
COPPER	NA - 06
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
DIBENZO(A,H)ANTHRACENE	53-70-3
ETHYLBENZENE	100-41-4

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Oil Combustion

Contaminant	CAS
ETHYLENE	74-85-1
FLUORANTHENE	206-44-0
FLUORENE	86-73-7
FLUORINE	7782-41-4
FORMALDEHYDE	50-00-0
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
INDENO(1,2,3-C,D)PYRENE	193-39-5
IRON	7439-89-6
ISOPRENE	78-79-5
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
METHANE	74-82-8
NAPHTHALENE	91-20-3
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
NITROUS OXIDE	10024-97-2
PHENANTHRENE	85-01-8
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
PROPIONALDEHYDE	123-38-6
PROPYLENE	115-07-1
PYRENE	129-00-0
SELENIUM	NA - 12
SILVER	NA - 13
STYRENE	100-42-5
SULPHUR DIOXIDE	7446-09-5
TIN	7440-31-5

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Oil Combustion

Contaminant	CAS
TITANIUM	7440-32-6
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
1,2,4-TRIMETHYLBENZENE	95-63-6
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6
ZINC	NA - 14

APPENDIX B

REPORTABLE CONTAMINANTS FROM FUEL COMBUSTION

(This information is extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Wood/Bark Combustion

Contaminant	CAS
ACENAPHTHENE	83-32-9
ACENAPHTHYLENE	208-96-8
ACETALDEHYDE	75-07-0
ACETYLENE	74-86-2
ACROLEIN	107-02-8
ALUMINUM	7429-90-5
ANTHRACENE	120-12-7
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZ(A)ANTHRACENE	56-55-3
BENZENE	71-43-2
BENZO(A)PHENANTHRENE (CHRYSENE)	218-01-9
BENZO(A)PYRENE	50-32-8
BENZO(B)FLUORANTHENE	205-99-2
BENZO(E)PYRENE	192-97-2
BENZO(G,H,I)PERYLENE	191-24-2
BENZO(K)FLUORANTHENE	207-08-9
BERYLLIUM	7440-41-7
BIPHENYL	92-52-4
BORON	7440-42-8
BROMINE	7726-95-6
BUTYRALDEHYDE	123-72-8
CADMIUM	NA - 03
CARBON DIOXIDE	124-38-9
CARBON MONOXIDE	630-08-0
CHLORINE	7782-50-5
CHROMIUM	NA - 04
CHROMIUM (VI) COMPOUNDS	18540-29-9
COBALT	NA - 05
COPPER	NA - 06
DIBENZO(A,H)ANTHRACENE	53-70-3
ETHYLENE	74-85-1
FLUORANTHENE	206-44-0

APPENDIX B

REPORTABLE CONTAMINANTS FROM FUEL COMBUSTION

(This information is extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Wood/Bark Combustion

Contaminant	CAS
FLUORENE	86-73-7
FLUORINE	7782-41-4
FORMALDEHYDE	50-00-0
FURFURAL	98-01-1
HYDROCHLORIC ACID	7647-01-0
HYDROGEN CYANIDE	74-90-8
INDENO(1,2,3-C,D)PYRENE	193-39-5
IRON	7439-89-6
ISOBUTYRALDEHYDE	78-84-2
LEAD	NA - 08
LITHIUM - OTHER THAN HYDRIDES	7439-93-2
MANGANESE	NA - 09
MERCURY	NA - 10
METHANE	74-82-8
METHYL ETHYL KETONE	78-93-3
NAPHTHALENE	91-20-3
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
P-NITROPHENOL	100-02-7
NITROUS OXIDE	10024-97-2
PERYLENE	198-55-0
PHENANTHRENE	85-01-8
PHENOL	108-95-2
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
PROPIONALDEHYDE	123-38-6
PROPYLENE	115-07-1
PYRENE	129-00-0
SELENIUM	NA - 12

APPENDIX B

REPORTABLE CONTAMINANTS FROM FUEL COMBUSTION

(This information is extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Wood/Bark Combustion

Contaminant	CAS
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (TEQ)	1746-01-6
2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	51207-31-9
TIN	7440-31-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6
ZINC	NA - 14

Appendix C

Reportable Contaminants from Solvent Evaporation

(For Information Only)

REPORTABLE CONTAMINANTS FROM SOLVENT EVAPORATION

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Degreasing/Solvent Cleaning/Solvent Use

Contaminant	CAS
ACETONE	67-64-1
BENZENE	71-43-2
SEC-BUTYL ALCOHOL	78-92-2
CFC-11	75-69-4
CHLOROBENZENE	108-90-7
CHLOROFORM	67-66-3
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
O-DICHLOROBENZENE	95-50-1
DICHLOROMETHANE	75-09-2
DIMETHYLAMINE	124-40-3
2-ETHOXYETHANOL	110-80-5
ETHYL ETHER	60-29-7
ETHYLBENZENE	100-41-4
ETHYLENE GLYCOL	107-21-1
FURFURAL	98-01-1
GLYCOL ETHERS (MISC.)	N/A - M04
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
ISOPROPYL ALCOHOL	67-63-0
METHANOL	67-56-1
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
METHYL METHACRYLATE	80-62-6
MINERAL SPIRITS GROUP #1	N/A - M06
NAPHTHALENE	91-20-3
PHENOL	108-95-2
TETRACHLOROETHYLENE	127-18-4
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
1,1,2-TRICHLOROETHANE	79-00-5
TRICHLOROETHYLENE	79-01-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6

REPORTABLE CONTAMINANTS FROM SOLVENT EVAPORATION

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

REPORTABLE CONTAMINANTS FROM SOLVENT EVAPORATION

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Organic Chemical Storage

Contaminant	CAS
ACETALDEHYDE	75-07-0
ACETIC ACID	64-19-7
ACETONE	67-64-1
ACETONITRILE	75-05-8
ACETYLENE	74-86-2
ACROLEIN	107-02-8
ACRYLIC ACID	79-10-7
ACRYLONITRILE	107-13-1
ANILINE	62-53-3
BENZENE	71-43-2
BENZYL CHLORIDE	100-44-7
2-BUTOXYETHANOL	111-76-2
BUTYL ACRYLATE	141-32-2
I-BUTYL ALCOHOL	78-83-1
N-BUTYL ALCOHOL	71-36-3
TERT-BUTYL ALCOHOL	75-65-0
BUTYRALDEHYDE	123-72-8
CARBON DISULPHIDE	75-15-0
CARBON TETRACHLORIDE	56-23-5
CHLOROBENZENE	108-90-7
CHLOROETHANE	75-00-3
CHLOROFORM	67-66-3
CHLOROMETHANE	74-87-3
CRESOL	1319-77-3
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
CYCLOHEXANOL	108-93-0
1,2-DIBROMOETHANE	106-93-4
O-DICHLOROBENZENE	95-50-1
P-DICHLOROBENZENE	106-46-7
1,2-DICHLOROETHANE	107-06-2
DICHLOROMETHANE	75-09-2
DIMETHYLAMINE	124-40-3
EPICHLOROHYDRIN	106-89-8
2-ETHOXYETHANOL	110-80-5

REPORTABLE CONTAMINANTS FROM SOLVENT EVAPORATION

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Organic Chemical Storage

Contaminant	CAS
ETHYL ACETATE	141-78-6
ETHYL ACRYLATE	140-88-5
ETHYL ETHER	60-29-7
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
ETHYLENE GLYCOL	107-21-1
ETHYLENE OXIDE	75-21-8
FORMALDEHYDE	50-00-0
FORMIC ACID	64-18-6
GLYCOL ETHERS (MISC.)	N/A - M04
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
ISOBUTYRALDEHYDE	78-84-2
ISOPRENE	78-79-5
ISOPROPYL ALCOHOL	67-63-0
MALEIC ANHYDRIDE	108-31-6
METHANE	74-82-8
METHANOL	67-56-1
2-METHOXYETHANOL	109-86-4
METHYL ACRYLATE	96-33-3
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
METHYL METHACRYLATE	80-62-6
MINERAL SPIRITS GROUP #1	N/A - M06
MONOMETHYL AMINE	74-89-5
NITROBENZENE	98-95-3
PHENOL	108-95-2
PHTHALIC ANHYDRIDE	85-44-9
PROPIONALDEHYDE	123-38-6
PROPYLENE	115-07-1
PROPYLENE OXIDE	75-56-9
STYRENE	100-42-5
TETRACHLOROETHYLENE	127-18-4
TETRAHYDROFURAN	109-99-9
TOLUENE	108-88-3

REPORTABLE CONTAMINANTS FROM SOLVENT EVAPORATION

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Organic Chemical Storage

Contaminant	CAS
1,1,1-TRICHLOROETHANE	71-55-6
TRICHLOROETHYLENE	79-01-6
VINYL ACETATE	108-05-4
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
M-XYLENE	108-38-3
O-XYLENE	95-47-6
P-XYLENE	106-42-3

Note: Reporting contaminant depends on the contaminant stored.

REPORTABLE CONTAMINANTS FROM SOLVENT EVAPORATION

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Petroleum Liquids Storage

Contaminant	CAS
ACETYLENE	74-86-2
BENZENE	71-43-2
1,3-BUTADIENE	106-99-0
CHLOROBENZENE	108-90-7
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
ISOPRENE	78-79-5
METHANE	74-82-8
METHANOL	67-56-1
METHYL TERT-BUTYL ETHER	1634-04-4
NAPHTHALENE	91-20-3
PROPYLENE	115-07-1
STYRENE	100-42-5
TOLUENE	108-88-3
1,1,2-TRICHLOROETHANE	79-00-5
1,2,4-TRIMETHYLBENZENE	95-63-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
M-XYLENE	108-38-3
O-XYLENE	95-47-6
P-XYLENE	106-42-3

Note: Reporting contaminant depends on the contaminant stored.

REPORTABLE CONTAMINANTS FROM SOLVENT EVAPORATION

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Surface Coating/Printing

Contaminant	CAS
ACETIC ACID	64-19-7
ACETONE	67-64-1
ACETOPHENONE	98-86-2
ACETYLENE	74-86-2
BENZENE	71-43-2
BIPHENYL	92-52-4
1,3-BUTADIENE	106-99-0
2-BUTOXYETHANOL	111-76-2
I-BUTYL ALCOHOL	78-83-1
N-BUTYL ALCOHOL	71-36-3
SEC-BUTYL ALCOHOL	78-92-2
BUTYL BENZYL PHTHALATE	85-68-7
CHLOROBENZENE	108-90-7
CHLOROETHANE	75-00-3
CHLOROFORM	67-66-3
CHLOROMETHANE	74-87-3
CRESOL	1319-77-3
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
1,2-DIBROMOETHANE	106-93-4
DIBUTYL PHTHALATE	84-74-2
DICHLOROMETHANE	75-09-2
DIMETHYL PHENOL	1300-71-6
DIMETHYL PHTHALATE	131-11-3
DIPHENYLAMINE	122-39-4
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYL ETHER	60-29-7
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
ETHYLENE GLYCOL	107-21-1
ETHYLENE OXIDE	75-21-8
FORMALDEHYDE	50-00-0
FORMIC ACID	64-18-6

REPORTABLE CONTAMINANTS FROM SOLVENT EVAPORATION

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Surface Coating/Printing

Contaminant	CAS
GLYCOL ETHERS (MISC.)	N/A - M04
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
ISOPRENE	78-79-5
ISOPROPYL ALCOHOL	67-63-0
METHANE	74-82-8
METHANOL	67-56-1
2-METHOXYETHANOL	109-86-4
2-METHOXYETHYL ACETATE	110-49-6
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
METHYL TERT-BUTYL ETHER	1634-04-4
MINERAL SPIRITS GROUP #1	N/A - M06
MINERAL SPIRITS GROUP #2	N/A - M17
NAPHTHALENE	91-20-3
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
O-PHENYLPHENOL	90-43-7
PHTHALIC ANHYDRIDE	85-44-9
PROPYLENE	115-07-1
STYRENE	100-42-5
TETRACHLOROETHYLENE	127-18-4
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
1,1,2-TRICHLOROETHANE	79-00-5
TRICHLOROETHYLENE	79-01-6
TRIETHYLAMINE	121-44-8
1,2,4-TRIMETHYLBENZENE	95-63-6
VINYL ACETATE	108-05-4
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
M-XYLENE	108-38-3
O-XYLENE	95-47-6
P-XYLENE	106-42-3

Appendix D

Reportable Contaminants by Industrial Sector

(For Information Only)

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Conventional Oil and Gas Extraction (NAICS Code: 211113)

Contaminant	CAS
ACETYLENE	74-86-2
BENZENE	71-43-2
1,3-BUTADIENE	106-99-0
CHLOROBENZENE	108-90-7
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
FORMALDEHYDE	50-00-0
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
ISOPRENE	78-79-5
METHANE	74-82-8
METHANOL	67-56-1
METHYL TERT-BUTYL ETHER	1634-04-4
NAPHTHALENE	91-20-3
PROPYLENE	115-07-1
STYRENE	100-42-5
SULPHUR DIOXIDE	7446-09-5
TOLUENE	108-88-3
1,1,2-TRICHLOROETHANE	79-00-5
1,2,4-TRIMETHYLBENZENE	95-63-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
M-XYLENE	108-38-3
O-XYLENE	95-47-6
P-XYLENE	106-42-3

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Non-Conventional Oil Extraction (NAICS Code: 211114)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Bituminous Coal Mining (NAICS Code: 212114)

Contaminant	CAS
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SULPHUR DIOXIDE	7446-09-5
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Subbituminous Coal Mining (NAICS Code: 212115)

Contaminant	CAS
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SULPHUR DIOXIDE	7446-09-5
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Lignite Coal Mining (NAICS Code: 212116)

Contaminant	CAS
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SULPHUR DIOXIDE	7446-09-5
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Iron Ore Mining (NAICS Code: 212210)

Contaminant	CAS
ACETYLENE	74-86-2
ALUMINUM	7429-90-5
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZENE	71-43-2
BERYLLIUM	7440-41-7
BROMINE	7726-95-6
CADMIUM	NA - 03
CARBON DIOXIDE	124-38-9
CARBON MONOXIDE	630-08-0
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
CYCLOHEXANE	110-82-7
ETHYLBENZENE	100-41-4
FORMALDEHYDE	50-00-0
N-HEXANE	110-54-3
HYDROGEN SULPHIDE	7783-06-4
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
METHANE	74-82-8
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PROPYLENE	115-07-1
SELENIUM	NA - 12
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
TIN	7440-31-5
TITANIUM	7440-32-6

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Iron Ore Mining (NAICS Code: 212210)

Contaminant	CAS
TOLUENE	108-88-3
TOTAL REDUCED SULPHUR (TRS)	N/A - M14
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Gold and Silver Ore Mining (NAICS Code: 212220)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Lead-Zinc Ore Mining (NAICS Code: 212231)	
Contaminant	**CAS**
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Nickel-Copper Ore Mining (NAICS Code: 212232)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Copper-Zinc Ore Mining (NAICS Code: 212233)	
Contaminant	**CAS**
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Uranium Ore Mining (NAICS Code: 212291)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

All Other Metal Ore Mining (NAICS Code: 212299)

Contaminant	CAS
ACENAPHTHENE	83-32-9
ACENAPHTHYLENE	208-96-8
ALUMINUM	7429-90-5
ANTHRACENE	120-12-7
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZ(A)ANTHRACENE	56-55-3
BENZENE	71-43-2
BENZO(A)PHENANTHRENE (CHRYSENE)	218-01-9
BENZO(A)PYRENE	50-32-8
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
CYCLOHEXANE	110-82-7
ETHYLBENZENE	100-41-4
FLUORANTHENE	206-44-0
FLUORENE	86-73-7
FORMALDEHYDE	50-00-0
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
IRON	7439-89-6
ISOPRENE	78-79-5
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
METHANE	74-82-8
NAPHTHALENE	91-20-3
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHENANTHRENE	85-01-8
PHENOL	108-95-2
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

All Other Metal Ore Mining (NAICS Code: 212299)

Contaminant	CAS
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PYRENE	129-00-0
SELENIUM	NA - 12
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
TIN	7440-31-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
1,2,4-TRIMETHYLBENZENE	95-63-6
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6
P-XYLENE	106-42-3
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Granite Mining and Quarrying (NAICS Code: 212314)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
NICKEL	NA - 11
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Limestone Mining and Quarrying (NAICS Code: 212315)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
NICKEL	NA - 11
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Marble Mining and Quarrying (NAICS Code: 212316)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
ASBESTOS	1332-21-4
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SULPHUR DIOXIDE	7446-09-5
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Sandstone Mining and Quarrying (NAICS Code: 212317)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
NICKEL	NA - 11
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Sand and Gravel Mining and Quarrying (NAICS Code: 212323)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
TITANIUM	7440-32-6
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Shale, Clay and Refractory Mineral Mining and Quarrying (NAICS Code: 212326)

Contaminant	CAS
CARBON DIOXIDE	124-38-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Diamond Mining (NAICS Code: 212392)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
ASBESTOS	1332-21-4
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SULPHUR DIOXIDE	7446-09-5
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Salt Mining (NAICS Code: 212393)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Asbestos Mining (NAICS Code: 212394)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
ASBESTOS	1332-21-4
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SULPHUR DIOXIDE	7446-09-5
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Gypsum Mining (NAICS Code: 212395)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
ASBESTOS	1332-21-4
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SULPHUR DIOXIDE	7446-09-5
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Potash Mining (NAICS Code: 212396)

Contaminant	CAS
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Peat Extraction (NAICS Code: 212397)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
ASBESTOS	1332-21-4
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SULPHUR DIOXIDE	7446-09-5
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

All Other Non-Metallic Mineral Mining and Quarrying (NAICS Code: 212398)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
ASBESTOS	1332-21-4
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SULPHUR DIOXIDE	7446-09-5
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Oil and Gas Contract Drilling (NAICS Code: 213111)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Contract Drilling (except Oil and Gas) (NAICS Code: 213117)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Services to Oil and Gas Extraction (NAICS Code: 213118)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Support Activities for Mining (NAICS Code: 213119)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Hydro-Electric Power Generation (NAICS Code: 221111)	
Contaminant	**CAS**
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Fossil-Fuel Electric Power Generation (NAICS Code: 221112)

Contaminant	CAS
REFER TO FUEL COMBUSTION SECTIONS	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Nuclear Electric Power Generation (NAICS Code: 221113)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Electric Power Generation (NAICS Code: 221119)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Electric Bulk Power Transmission and Control (NAICS Code: 221121)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Electric Power Distribution (NAICS Code: 221122)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Natural Gas Distribution (NAICS Code: 221210)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Sewage Treatment Facilities (NAICS Code: 221320)

Contaminant	CAS
ACETALDEHYDE	75-07-0
ACETONE	67-64-1
ACETONITRILE	75-05-8
ACROLEIN	107-02-8
ACRYLONITRILE	107-13-1
ANILINE	62-53-3
ARSENIC	NA - 02
BENZENE	71-43-2
1,3-BUTADIENE	106-99-0
CARBON DIOXIDE	124-38-9
CARBON DISULPHIDE	75-15-0
CARBON MONOXIDE	630-08-0
CARBON TETRACHLORIDE	56-23-5
CFC-11	75-69-4
CFC-12	75-71-8
CHLORINE	7782-50-5
CHLOROBENZENE	108-90-7
CHLOROETHANE	75-00-3
CHLOROFORM	67-66-3
CHLOROMETHANE	74-87-3
CRESOL	1319-77-3
O-CRESOL	95-48-7
P-CRESOL	106-44-5
1,2-DIBROMOETHANE	106-93-4
P-DICHLOROBENZENE	106-46-7
1,1-DICHLOROETHANE	75-34-3
1,2-DICHLOROETHANE	107-06-2
DICHLOROMETHANE	75-09-2
1,2-DICHLOROPROPANE	78-87-5
DIMETHYL SULPHIDE	75-18-3
1,4-DIOXANE	123-91-1
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
FORMALDEHYDE	50-00-0
HCFC-22	75-45-6

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Sewage Treatment Facilities (NAICS Code: 221320)

Contaminant	CAS
HEXACHLOROBENZENE	118-74-1
N-HEXANE	110-54-3
HYDROCHLORIC ACID	7647-01-0
HYDROGEN FLUORIDE	7664-39-3
HYDROGEN SULPHIDE	7783-06-4
MERCAPTANS (AS METHYL MERCAPTAN) - TOTAL	74-93-1
MERCURY	NA - 10
METHANE	74-82-8
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
NAPHTHALENE	91-20-3
NITROBENZENE	98-95-3
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PENTACHLOROPHENOL (PCP)	87-86-5
PHENOL	108-95-2
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
PROPYLENE	115-07-1
STYRENE	100-42-5
2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	51207-31-9
1,1,2,2-TETRACHLOROETHANE	79-34-5
TETRACHLOROETHYLENE	127-18-4
TOLUENE	108-88-3
TOTAL REDUCED SULPHUR (TRS)	N/A - M14
1,2,4-TRICHLOROBENZENE	120-82-1
1,1,1-TRICHLOROETHANE	71-55-6
1,1,2-TRICHLOROETHANE	79-00-5
TRICHLOROETHYLENE	79-01-6
VINYL CHLORIDE	75-01-4
VINYLIDENE CHLORIDE	75-35-4
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Sewage Treatment Facilities (NAICS Code: 221320)

Contaminant	CAS
XYLENE	1330-20-7

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Steam and Air-Conditioning Supply (NAICS Code: 221330)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Dog and Cat Food Manufacturing (NAICS Code: 311111)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Animal Food Manufacturing (NAICS Code: 311119)

Contaminant	CAS
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Flour Milling (NAICS Code: 311211)

Contaminant	CAS
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Rice Milling and Malt Manufacturing (NAICS Code: 311214)

Contaminant	CAS
ARSENIC	NA - 02
COPPER	NA - 06
MANGANESE	NA - 09
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Wet Corn Milling (NAICS Code: 311221)

Contaminant	CAS
N-HEXANE	110-54-3
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Oilseed Processing (NAICS Code: 311224)

Contaminant	CAS
N-HEXANE	110-54-3
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Fat and Oil Refining and Blending (NAICS Code: 311225)

Contaminant	CAS
N-HEXANE	110-54-3
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Breakfast Cereal Manufacturing (NAICS Code: 311230)

Contaminant	CAS
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Sugar Manufacturing (NAICS Code: 311310)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Chocolate and Confectionery Manufacturing from Cacao Beans (NAICS Code: 311320)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Confectionery Manufacturing from Purchased Chocolate (NAICS Code: 311330)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Non-Chocolate Confectionery Manufacturing (NAICS Code: 311340)

Contaminant	CAS
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Frozen Food Manufacturing (NAICS Code: 311410)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Fruit and Vegetable Canning, Pickling and Drying (NAICS Code: 311420)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Fluid Milk Manufacturing (NAICS Code: 311511)

Contaminant	CAS
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Butter, Cheese, and Dry and Condensed Dairy Products Manufacturing (NAICS Code: 311515)

Contaminant	CAS
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Ice Cream and Frozen Dessert Manufacturing (NAICS Code: 311520)

Contaminant	CAS
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Animal (except Poultry) Slaughtering (NAICS Code: 311611)	
Contaminant	**CAS**
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Rendering and Meat Processing from Carcasses (NAICS Code: 311614)

Contaminant	CAS
ACETIC ACID	64-19-7
FORMALDEHYDE	50-00-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Poultry Processing (NAICS Code: 311615)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Seafood Product Preparation and Packaging (NAICS Code: 311710)

Contaminant	CAS
HYDROGEN SULPHIDE	7783-06-4
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
TOTAL REDUCED SULPHUR (TRS)	N/A - M14
TRIETHYLAMINE	121-44-8
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Commercial Bakeries and Frozen Bakery Product Manufacturing (NAICS Code: 311814)

Contaminant	CAS
I-BUTYL ALCOHOL	78-83-1
ETHYL ACETATE	141-78-6
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Cookie and Cracker Manufacturing (NAICS Code: 311821)

Contaminant	CAS
I-BUTYL ALCOHOL	78-83-1
ETHYL ACETATE	141-78-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Flour Mixes and Dough Manufacturing from Purchased Flour (NAICS Code: 311822)

Contaminant	CAS
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Dry Pasta Manufacturing (NAICS Code: 311823)

Contaminant	CAS
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These i ormation are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not inten ed to be a complete list of contaminants reportable by a specific sector. Methods of emission estimatio , such as mass balance; stack testing data; engineering process emission calculation can also be used y reporting facilities to determine the air contaminants. This list may be updated from time to time whe new information are available.)

Torti a Manufacturing (NAICS Code: 311830)	
Contaminant	CAS
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
VOLA ILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Roasted Nut and Peanut Butter Manufacturing (NAICS Code: 311911)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Other Snack Food Manufacturing (NAICS Code: 311919)	
Contaminant	**CAS**
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Coffee and Tea Manufacturing (NAICS Code: 311920)

Contaminant	CAS
ACETALDEHYDE	75-07-0
ACROLEIN	107-02-8
CARBON MONOXIDE	630-08-0
METHANE	74-82-8
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Flavouring Syrup and Concentrate Manufacturing (NAICS Code: 311930)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Seasoning and Dressing Manufacturing (NAICS Code: 311940)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

All Other Food Manufacturing (NAICS Code: 311990)

Contaminant	CAS
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Soft Drink and Ice Manufacturing (NAICS Code: 312110)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Breweries (NAICS Code: 312120)

Contaminant	CAS
I-BUTYL ALCOHOL	78-83-1
CARBON DIOXIDE	124-38-9
CARBON MONOXIDE	630-08-0
CHLORINE	7782-50-5
ETHYL ACETATE	141-78-6
HYDROGEN SULPHIDE	2148875
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
TOTAL REDUCED SULPHUR (TRS)	N/A - M14
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Wineries (NAICS Code: 312130)

Contaminant	CAS
ACETALDEHYDE	75-07-0
I-BUTYL ALCOHOL	78-83-1
N-BUTYL ALCOHOL	71-36-3
SEC-BUTYL ALCOHOL	78-92-2
ETHYL ACETATE	141-78-6
HYDROGEN SULPHIDE	2148875
METHANOL	67-56-1
TOTAL REDUCED SULPHUR (TRS)	N/A - M14
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Distilleries (NAICS Code: 312140)

Contaminant	CAS
I-BUTYL ALCOHOL	78-83-1
ETHYL ACETATE	141-78-6
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Tobacco Stemming and Redrying (NAICS Code: 312210)

Contaminant	CAS
SULPHUR DIOXIDE	7446-09-5
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Tobacco Product Manufacturing (NAICS Code: 312220)

Contaminant	CAS
SULPHUR DIOXIDE	7446-09-5
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Fibre, Yarn and Thread Mills (NAICS Code: 313110)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Broad-Woven Fabric Mills (NAICS Code: 313210)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Narrow Fabric Mills and Schiffli Machine Embroidery
(NAICS Code: 313220)

Contaminant	CAS
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Nonwoven Fabric Mills (NAICS Code: 313230)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Knit Fabric Mills (NAICS Code: 313240)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Textile and Fabric Finishing (NAICS Code: 313310)

Contaminant	CAS
METHANE	74-82-8
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Fabric Coating (NAICS Code: 313320)

Contaminant	CAS
ACETONE	67-64-1
2-BUTOXYETHANOL	111-76-2
I-BUTYL ALCOHOL	78-83-1
N-BUTYL ALCOHOL	71-36-3
SEC-BUTYL ALCOHOL	78-92-2
CYCLOHEXANE	110-82-7
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYLBENZENE	100-41-4
ETHYLENE GLYCOL	107-21-1
GLYCOL ETHERS (MISC.)	N/A - M04
N-HEPTANE	142-82-5
ISOPROPYL ALCOHOL	67-63-0
METHANOL	67-56-1
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
MINERAL SPIRITS GROUP #1	N/A - M06
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Carpet and Rug Mills (NAICS Code: 314110)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Curtain and Linen Mills (NAICS Code: 314120)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Textile Bag and Canvas Mills (NAICS Code: 314910)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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All Other Textile Product Mills (NAICS Code: 314990)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Hosiery and Sock Mills (NAICS Code: 315110)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Clothing Knitting Mills (NAICS Code: 315190)	
Contaminant	**CAS**
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Cut and Sew Clothing Contracting (NAICS Code: 315210)	
Contaminant	**CAS**
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturing (NAICS Code: 315221)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Men's and Boys' Cut and Sew Suit, Coat and Overcoat Manufacturing (NAICS Code: 315222)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Men's and Boys' Cut and Sew Shirt Manufacturing (NAICS Code: 315226)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Men's and Boys' Cut and Sew Trouser, Slack and Jean Manufacturing (NAICS Code: 315227)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Men's and Boys' Cut and Sew Clothing Manufacturing (NAICS Code: 315229)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Women's and Girls' Cut and Sew Lingerie, Loungewear and Nightwear Manufacturing (NAICS Code: 315231)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing (NAICS Code: 315232)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Women's and Girls' Cut and Sew Dress Manufacturing (NAICS Code: 315233)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket and Skirt Manufacturing (NAICS Code: 315234)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Women's and Girls' Cut and Sew Clothing Manufacturing (NAICS Code: 315239)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Infants' Cut and Sew Clothing Manufacturing (NAICS Code: 315291)	
Contaminant	**CAS**
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Fur and Leather Clothing Manufacturing (NAICS Code: 315292)

Contaminant	CAS
ACETONE	67-64-1
2-BUTOXYETHANOL	111-76-2
SEC-BUTYL ALCOHOL	78-92-2
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYLENE GLYCOL	107-21-1
GLYCOL ETHERS (MISC.)	N/A - M04
ISOPROPYL ALCOHOL	67-63-0
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
MINERAL SPIRITS GROUP #1	N/A - M06
NAPHTHALENE	91-20-3
TOLUENE	108-88-3
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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All Other Cut and Sew Clothing Manufacturing (NAICS Code: 315299)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Clothing Accessories and Other Clothing Manufacturing (NAICS Code: 315990)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Leather and Hide Tanning and Finishing (NAICS Code: 316110)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Footwear Manufacturing (NAICS Code: 316210)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Other Leather and Allied Product Manufacturing (NAICS Code: 316990)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Sawmills (except Shingle and Shake Mills) (NAICS Code: 321111)

Contaminant	CAS
ALUMINUM	7429-90-5
CHLORINE	7782-50-5
IRON	7439-89-6
MANGANESE	NA - 09
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Shingle and Shake Mills (NAICS Code: 321112)

Contaminant	CAS
ALUMINUM	7429-90-5
CHLORINE	7782-50-5
IRON	7439-89-6
MANGANESE	NA - 09
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Wood Preservation (NAICS Code: 321114)

Contaminant	CAS
ACENAPHTHENE	83-32-9
ACENAPHTHYLENE	208-96-8
ANTHRACENE	120-12-7
BENZ(A)ANTHRACENE	56-55-3
BENZO(A)PHENANTHRENE (CHRYSENE)	218-01-9
BENZO(A)PYRENE	50-32-8
BENZO(B)FLUORANTHENE	205-99-2
BENZO(K)FLUORANTHENE	207-08-9
CHROMIUM	NA - 04
COPPER	NA - 06
DICHLOROMETHANE	75-09-2
FLUORANTHENE	206-44-0
FLUORENE	86-73-7
NAPHTHALENE	91-20-3
PHENANTHRENE	85-01-8
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PYRENE	129-00-0
TETRACHLOROETHYLENE	127-18-4
1,1,1-TRICHLOROETHANE	71-55-6
TRICHLOROETHYLENE	79-01-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Hardwood Veneer and Plywood Mills (NAICS Code: 321211)

Contaminant	CAS
ALUMINUM	7429-90-5
ANTHRACENE	120-12-7
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZO(A)PYRENE	50-32-8
BENZO(E)PYRENE	192-97-2
BROMINE	7726-95-6
CADMIUM	NA - 03
CARBON MONOXIDE	630-08-0
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
FORMALDEHYDE	50-00-0
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHENANTHRENE	85-01-8
PHENOL	108-95-2
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PYRENE	129-00-0
SELENIUM	NA - 12
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
TIN	7440-31-5
TITANIUM	7440-32-6
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Softwood Veneer and Plywood Mills (NAICS Code: 321212)

Contaminant	CAS
ALUMINUM	7429-90-5
ANTHRACENE	120-12-7
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZO(A)PYRENE	50-32-8
BENZO(E)PYRENE	192-97-2
BROMINE	7726-95-6
CADMIUM	NA - 03
CARBON MONOXIDE	630-08-0
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
FORMALDEHYDE	50-00-0
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHENANTHRENE	85-01-8
PHENOL	108-95-2
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PYRENE	129-00-0
SELENIUM	NA - 12
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
TIN	7440-31-5
TITANIUM	7440-32-6
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Structural Wood Product Manufacturing (NAICS Code: 321215)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Particle Board and Fibreboard Mills (NAICS Code: 321216)

Contaminant	CAS
ALUMINUM	7429-90-5
CHLORINE	7782-50-5
IRON	7439-89-6
MANGANESE	NA - 09
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Waferboard Mills (NAICS Code: 321217)

Contaminant	CAS
ALUMINUM	7429-90-5
CHLORINE	7782-50-5
IRON	7439-89-6
MANGANESE	NA - 09
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Wood Window and Door Manufacturing (NAICS Code: 321911)	
Contaminant	**CAS**
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Millwork (NAICS Code: 321919)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Wood Container and Pallet Manufacturing (NAICS Code: 321920)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Manufactured (Mobile) Home Manufacturing (NAICS Code: 321991)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Prefabricated Wood Building Manufacturing (NAICS Code: 321992)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

All Other Miscellaneous Wood Product Manufacturing (NAICS Code: 321999)

Contaminant	CAS
ACETONE	67-64-1
2-BUTOXYETHANOL	111-76-2
SEC-BUTYL ALCOHOL	78-92-2
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYLENE GLYCOL	107-21-1
GLYCOL ETHERS (MISC.)	N/A - M04
ISOPROPYL ALCOHOL	67-63-0
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
MINERAL SPIRITS GROUP #1	N/A - M06
TOLUENE	108-88-3
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Mechanical Pulp Mills (NAICS Code: 322111)

Contaminant	CAS
ACETALDEHYDE	75-07-0
ACETONE	67-64-1
ALUMINUM	7429-90-5
ANTHRACENE	120-12-7
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZENE	71-43-2
BERYLLIUM	7440-41-7
BROMINE	7726-95-6
2-BUTOXYETHANOL	111-76-2
SEC-BUTYL ALCOHOL	78-92-2
CADMIUM	NA - 03
CARBON MONOXIDE	630-08-0
CARBON TETRACHLORIDE	56-23-5
CHLORINE	7782-50-5
CHLOROFORM	67-66-3
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
1,2-DIBROMOETHANE	106-93-4
1,2-DICHLOROETHANE	107-06-2
DICHLOROMETHANE	75-09-2
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYLBENZENE	100-41-4
ETHYLENE GLYCOL	107-21-1
FLUORANTHENE	206-44-0
FLUORINE	7782-41-4
FORMALDEHYDE	50-00-0
GLYCOL ETHERS (MISC.)	N/A - M04
HYDROCHLORIC ACID	7647-01-0
HYDROGEN SULPHIDE	7783-06-4
IRON	7439-89-6
ISOPROPYL ALCOHOL	67-63-0

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Mechanical Pulp Mills (NAICS Code: 322111)

Contaminant	CAS
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
METHANOL	67-56-1
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
MINERAL SPIRITS GROUP #1	N/A - M06
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHENANTHRENE	85-01-8
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
SELENIUM	NA - 12
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	51207-31-9
TETRACHLOROETHYLENE	127-18-4
TIN	7440-31-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
TOTAL REDUCED SULPHUR (TRS)	N/A - M14
1,1,1-TRICHLOROETHANE	71-55-6
TRICHLOROETHYLENE	79-01-6
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Chemical Pulp Mills (NAICS Code: 322112)

Contaminant	CAS
ACETALDEHYDE	75-07-0
ACETONE	67-64-1
ALUMINUM	7429-90-5
ANTHRACENE	120-12-7
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZENE	71-43-2
BERYLLIUM	7440-41-7
BROMINE	7726-95-6
2-BUTOXYETHANOL	111-76-2
SEC-BUTYL ALCOHOL	78-92-2
CADMIUM	NA - 03
CARBON MONOXIDE	630-08-0
CARBON TETRACHLORIDE	56-23-5
CHLORINE	7782-50-5
CHLOROFORM	67-66-3
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
1,2-DIBROMOETHANE	106-93-4
1,2-DICHLOROETHANE	107-06-2
DICHLOROMETHANE	75-09-2
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYLBENZENE	100-41-4
ETHYLENE GLYCOL	107-21-1
FLUORANTHENE	206-44-0
FLUORINE	7782-41-4
FORMALDEHYDE	50-00-0
GLYCOL ETHERS (MISC.)	N/A - M04
HYDROCHLORIC ACID	7647-01-0
HYDROGEN SULPHIDE	7783-06-4
IRON	7439-89-6
ISOPROPYL ALCOHOL	67-63-0

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Chemical Pulp Mills (NAICS Code: 322112)

Contaminant	CAS
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
METHANOL	67-56-1
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
MINERAL SPIRITS GROUP #1	N/A - M06
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHENANTHRENE	85-01-8
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
SELENIUM	NA - 12
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	51207-31-9
TETRACHLOROETHYLENE	127-18-4
TIN	7440-31-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
TOTAL REDUCED SULPHUR (TRS)	N/A - M14
1,1,1-TRICHLOROETHANE	71-55-6
TRICHLOROETHYLENE	79-01-6
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Paper (except Newsprint) Mills (NAICS Code: 322121)

Contaminant	CAS
ACETALDEHYDE	75-07-0
ACETONE	67-64-1
ALUMINUM	7429-90-5
ANTHRACENE	120-12-7
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZENE	71-43-2
BERYLLIUM	7440-41-7
BROMINE	7726-95-6
2-BUTOXYETHANOL	111-76-2
SEC-BUTYL ALCOHOL	78-92-2
CADMIUM	NA - 03
CARBON MONOXIDE	630-08-0
CARBON TETRACHLORIDE	56-23-5
CHLORINE	7782-50-5
CHLOROFORM	67-66-3
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
1,2-DIBROMOETHANE	106-93-4
1,2-DICHLOROETHANE	107-06-2
DICHLOROMETHANE	75-09-2
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYLBENZENE	100-41-4
ETHYLENE GLYCOL	107-21-1
FLUORANTHENE	206-44-0
FLUORINE	7782-41-4
FORMALDEHYDE	50-00-0
GLYCOL ETHERS (MISC.)	N/A - M04
HYDROCHLORIC ACID	7647-01-0
IRON	7439-89-6
ISOPROPYL ALCOHOL	67-63-0
LEAD	NA - 08

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Paper (except Newsprint) Mills (NAICS Code: 322121)

Contaminant	CAS
MANGANESE	NA - 09
MERCURY	NA - 10
METHANOL	67-56-1
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
MINERAL SPIRITS GROUP #1	N/A - M06
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHENANTHRENE	85-01-8
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
SELENIUM	NA - 12
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	51207-31-9
TETRACHLOROETHYLENE	127-18-4
TIN	7440-31-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
TRICHLOROETHYLENE	79-01-6
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Newsprint Mills (NAICS Code: 322122)

Contaminant	CAS
ACETALDEHYDE	75-07-0
ACETONE	67-64-1
ALUMINUM	7429-90-5
ANTHRACENE	120-12-7
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZENE	71-43-2
BERYLLIUM	7440-41-7
BROMINE	7726-95-6
2-BUTOXYETHANOL	111-76-2
SEC-BUTYL ALCOHOL	78-92-2
CADMIUM	NA - 03
CARBON MONOXIDE	630-08-0
CARBON TETRACHLORIDE	56-23-5
CHLORINE	7782-50-5
CHLOROFORM	67-66-3
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
1,2-DIBROMOETHANE	106-93-4
1,2-DICHLOROETHANE	107-06-2
DICHLOROMETHANE	75-09-2
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYLBENZENE	100-41-4
ETHYLENE GLYCOL	107-21-1
FLUORANTHENE	206-44-0
FLUORINE	7782-41-4
FORMALDEHYDE	50-00-0
GLYCOL ETHERS (MISC.)	N/A - M04
HYDROCHLORIC ACID	7647-01-0
IRON	7439-89-6
ISOPROPYL ALCOHOL	67-63-0
LEAD	NA - 08

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Newsprint Mills (NAICS Code: 322122)

Contaminant	CAS
MANGANESE	NA - 09
MERCURY	NA - 10
METHANOL	67-56-1
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
MINERAL SPIRITS GROUP #1	N/A - M06
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHENANTHRENE	85-01-8
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
SELENIUM	NA - 12
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	51207-31-9
TETRACHLOROETHYLENE	127-18-4
TIN	7440-31-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
TRICHLOROETHYLENE	79-01-6
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Paperboard Mills (NAICS Code: 322130)

Contaminant	CAS
ACETALDEHYDE	75-07-0
ACETONE	67-64-1
ALUMINUM	7429-90-5
ANTHRACENE	120-12-7
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZENE	71-43-2
BERYLLIUM	7440-41-7
BROMINE	7726-95-6
2-BUTOXYETHANOL	111-76-2
SEC-BUTYL ALCOHOL	78-92-2
CADMIUM	NA - 03
CARBON MONOXIDE	630-08-0
CARBON TETRACHLORIDE	56-23-5
CHLORINE	7782-50-5
CHLOROFORM	67-66-3
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
1,2-DIBROMOETHANE	106-93-4
1,2-DICHLOROETHANE	107-06-2
DICHLOROMETHANE	75-09-2
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYLBENZENE	100-41-4
ETHYLENE GLYCOL	107-21-1
FLUORANTHENE	206-44-0
FLUORINE	7782-41-4
FORMALDEHYDE	50-00-0
GLYCOL ETHERS (MISC.)	N/A - M04
HYDROCHLORIC ACID	7647-01-0
IRON	7439-89-6
ISOPROPYL ALCOHOL	67-63-0
LEAD	NA - 08

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Paperboard Mills (NAICS Code: 322130)

Contaminant	CAS
MANGANESE	NA - 09
MERCURY	NA - 10
METHANOL	67-56-1
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
MINERAL SPIRITS GROUP #1	N/A - M06
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHENANTHRENE	85-01-8
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
SELENIUM	NA - 12
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	51207-31-9
TETRACHLOROETHYLENE	127-18-4
TIN	7440-31-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
TRICHLOROETHYLENE	79-01-6
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Corrugated and Solid Fibre Box Manufacturing (NAICS Code: 322211)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Folding Paperboard Box Manufacturing (NAICS Code: 322212)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Paperboard Container Manufacturing (NAICS Code: 322219)	
Contaminant	**CAS**
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Paper Bag and Coated and Treated Paper Manufacturing (NAICS Code: 322220)

Contaminant	CAS
ACETONE	67-64-1
2-BUTOXYETHANOL	111-76-2
SEC-BUTYL ALCOHOL	78-92-2
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYLENE GLYCOL	107-21-1
GLYCOL ETHERS (MISC.)	N/A - M04
ISOPROPYL ALCOHOL	67-63-0
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
MINERAL SPIRITS GROUP #1	N/A - M06
NAPHTHALENE	91-20-3
TOLUENE	108-88-3
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Stationery Product Manufacturing (NAICS Code: 322230)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Sanitary Paper Product Manufacturing (NAICS Code: 322291)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

All Other Converted Paper Product Manufacturing (NAICS Code: 322299)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Commercial Screen Printing (NAICS Code: 323113)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Quick Printing (NAICS Code: 323114)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Digital Printing (NAICS Code: 323115)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Manifold Business Forms Printing (NAICS Code: 323116)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Printing (Includes Commercial Lithographic, Gravure and Flexographic Printing) (NAICS Code: 323119)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Support Activities for Printing (NAICS Code: 323120)	
Contaminant	**CAS**
LEAD	NA - 08
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Petroleum Refineries (NAICS Code: 324110)

Contaminant	CAS
ACETALDEHYDE	75-07-0
ACETYLENE	74-86-2
ALUMINUM	7429-90-5
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZENE	71-43-2
BENZO(A)PHENANTHRENE (CHRYSENE)	218-01-9
BENZO(A)PYRENE	50-32-8
BROMINE	7726-95-6
1,3-BUTADIENE	106-99-0
CADMIUM	NA - 03
CARBON MONOXIDE	630-08-0
CARBON TETRACHLORIDE	56-23-5
CHLORINE	7782-50-5
CHLOROBENZENE	108-90-7
CHLOROFORM	67-66-3
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
1,2-DICHLOROETHANE	107-06-2
DICHLOROMETHANE	75-09-2
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
FORMALDEHYDE	50-00-0
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
HYDROCHLORIC ACID	7647-01-0
HYDROGEN SULPHIDE	7783-06-4
IRON	7439-89-6
ISOPRENE	78-79-5
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
METHANE	74-82-8

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Petroleum Refineries (NAICS Code: 324110)

Contaminant	CAS
METHANOL	67-56-1
METHYL TERT-BUTYL ETHER	1634-04-4
NAPHTHALENE	91-20-3
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHENOL	108-95-2
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PROPYLENE	115-07-1
SELENIUM	NA - 12
SILVER	NA - 13
STYRENE	100-42-5
SULPHUR DIOXIDE	7446-09-5
TETRACHLOROETHYLENE	127-18-4
TIN	7440-31-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
TOTAL REDUCED SULPHUR (TRS)	N/A - M14
1,1,1-TRICHLOROETHANE	71-55-6
1,1,2-TRICHLOROETHANE	79-00-5
TRICHLOROETHYLENE	79-01-6
1,2,4-TRIMETHYLBENZENE	95-63-6
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
M-XYLENE	108-38-3
O-XYLENE	95-47-6
P-XYLENE	106-42-3
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Asphalt Paving Mixture and Block Manufacturing
(NAICS Code: 324121)

Contaminant	CAS
ACENAPHTHENE	83-32-9
ACENAPHTHYLENE	208-96-8
ACETALDEHYDE	75-07-0
ACETONE	67-64-1
ACETYLENE	74-86-2
ACROLEIN	107-02-8
ANTHRACENE	120-12-7
ARSENIC	NA - 02
BENZ(A)ANTHRACENE	56-55-3
BENZENE	71-43-2
BENZO(A)PHENANTHRENE (CHRYSENE)	218-01-9
BENZO(A)PYRENE	50-32-8
BENZO(B)FLUORANTHENE	205-99-2
BENZO(E)PYRENE	192-97-2
BENZO(G,H,I)PERYLENE	191-24-2
BENZO(K)FLUORANTHENE	207-08-9
BERYLLIUM	7440-41-7
CADMIUM	NA - 03
CARBON DIOXIDE	124-38-9
CARBON MONOXIDE	630-08-0
CHROMIUM	NA - 04
CHROMIUM (VI) COMPOUNDS	18540-29-9
COPPER	NA - 06
CROTONALDEHYDE	4170-30-3
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
DIBENZO(A,H)ANTHRACENE	53-70-3
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
FLUORANTHENE	206-44-0
FLUORENE	86-73-7
FORMALDEHYDE	50-00-0
N-HEPTANE	142-82-5
N-HEXANE	110-54-3

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Asphalt Paving Mixture and Block Manufacturing (NAICS Code: 324121)

Contaminant	CAS
INDENO(1,2,3-C,D)PYRENE	193-39-5
ISOBUTYRALDEHYDE	78-84-2
ISOPRENE	78-79-5
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
METHANE	74-82-8
METHYL ETHYL KETONE	78-93-3
NAPHTHALENE	91-20-3
NICKEL	NA - 11
OX!DES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PERYLENE	198-55-0
PHENANTHRENE	85-01-8
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PROPIONALDEHYDE	123-38-6
PROPYLENE	115-07-1
PYRENE	129-00-0
P-QUINONE	106-51-4
SELENIUM	NA - 12
SILVER	NA - 13
STYRENE	100-42-5
SULPHUR DIOXIDE	7446-09-5
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
1,2,4-TRIMETHYLBENZENE	95-63-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Asphalt Shingle and Coating Material Manufacturing (NAICS Code: 324122)

Contaminant	CAS
ACETYLENE	74-86-2
BENZ(A)ANTHRACENE	56-55-3
BENZENE	71-43-2
BENZO(A)PHENANTHRENE (CHRYSENE)	218-01-9
BENZO(A)PYRENE	50-32-8
CARBON MONOXIDE	630-08-0
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COBALT	NA - 05
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
FLUORANTHENE	206-44-0
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
IRON	7439-89-6
ISOPRENE	78-79-5
MANGANESE	NA - 09
METHANE	74-82-8
NAPHTHALENE	91-20-3
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PROPYLENE	115-07-1
SELENIUM	NA - 12
STYRENE	100-42-5
TOLUENE	108-88-3
1,2,4-TRIMETHYLBENZENE	95-63-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Petroleum and Coal Products Manufacturing
(NAICS Code: 324190)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Petrochemical Manufacturing (NAICS Code: 325110)

Contaminant	CAS
ACETALDEHYDE	75-07-0
ACETIC ACID	64-19-7
ACETONE	67-64-1
ACETONITRILE	75-05-8
ACROLEIN	107-02-8
ACRYLIC ACID	79-10-7
ACRYLONITRILE	107-13-1
ALUMINUM	7429-90-5
ANILINE	62-53-3
ARSENIC	NA - 02
BENZENE	71-43-2
1,3-BUTADIENE	106-99-0
BUTYL ACRYLATE	141-32-2
N-BUTYL ALCOHOL	71-36-3
SEC-BUTYL ALCOHOL	78-92-2
CARBON DIOXIDE	124-38-9
CARBON DISULPHIDE	75-15-0
CARBON MONOXIDE	630-08-0
CARBON TETRACHLORIDE	56-23-5
CFC-11	75-69-4
CFC-114	76-14-2
CFC-115	76-15-3
CFC-12	75-71-8
CFC-13	75-72-9
CHLORINE	7782-50-5
CHLOROBENZENE	108-90-7
CHLOROETHANE	75-00-3
CHLOROFORM	67-66-3
CHLOROMETHANE	74-87-3
CHROMIUM	NA - 04
COPPER	NA - 06
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
CYCLOHEXANOL	108-93-0
O-DICHLOROBENZENE	95-50-1

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Petrochemical Manufacturing (NAICS Code: 325110)

Contaminant	CAS
P-DICHLOROBENZENE	106-46-7
1,1-DICHLOROETHANE	75-34-3
1,2-DICHLOROETHANE	107-06-2
DICHLOROMETHANE	75-09-2
EPICHLOROHYDRIN	106-89-8
ETHYL ACRYLATE	140-88-5
ETHYL ETHER	60-29-7
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
ETHYLENE GLYCOL	107-21-1
ETHYLENE OXIDE	75-21-8
FORMALDEHYDE	50-00-0
GLYCOL ETHERS (MISC.)	N/A - M04
HCFC-22	75-45-6
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
HYDROGEN CYANIDE	74-90-8
IRON	7439-89-6
ISOPROPYL ALCOHOL	67-63-0
LEAD	NA - 08
MANGANESE	NA - 09
METHANE	74-82-8
METHANOL	67-56-1
METHYL ISOBUTYL KETONE	108-10-1
METHYL METHACRYLATE	80-62-6
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
NITROUS OXIDE	10024-97-2
PHENOL	108-95-2
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PROPYLENE	115-07-1
PROPYLENE OXIDE	75-56-9

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REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Petrochemical Manufacturing (NAICS Code: 325110)

Contaminant	CAS
STYRENE	100-42-5
SULPHUR DIOXIDE	7446-09-5
TETRACHLOROETHYLENE	127-18-4
TITANIUM	7440-32-6
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
TRICHLOROETHYLENE	79-01-6
VANADIUM	7440-62-2
VINYL ACETATE	108-05-4
VINYL CHLORIDE	75-01-4
VINYLIDENE CHLORIDE	75-35-4
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6
P-XYLENE	106-42-3
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Industrial Gas Manufacturing (NAICS Code: 325120)

Contaminant	CAS
ACETYLENE	74-86-2
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Synthetic Dye and Pigment Manufacturing (NAICS Code: 325130)

Contaminant	CAS
LEAD	NA - 08
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SULPHUR DIOXIDE	7446-09-5

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Alkali and Chlorine Manufacturing (NAICS Code: 325181)

Contaminant	CAS
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CARBON DIOXIDE	124-38-9
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
SULPHUR DIOXIDE	7446-09-5
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

All Other Basic Inorganic Chemical Manufacturing (NAICS Code: 325189)

Contaminant	CAS
ALUMINUM	7429-90-5
ANTIMONY	NA - 01
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
FLUORINE	7782-41-4
HYDROCHLORIC ACID	7647-01-0
HYDROGEN FLUORIDE	7664-39-3
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
TIN	7440-31-5
TITANIUM	7440-32-6
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Basic Organic Chemical Manufacturing (NAICS Code: 325190)

Contaminant	CAS
ACETALDEHYDE	75-07-0
ACETIC ACID	64-19-7
ACETONE	67-64-1
ACETONITRILE	75-05-8
ACROLEIN	107-02-8
ACRYLIC ACID	79-10-7
ACRYLONITRILE	107-13-1
ALUMINUM	7429-90-5
ANILINE	62-53-3
ARSENIC	NA - 02
BENZENE	71-43-2
1,3-BUTADIENE	106-99-0
BUTYL ACRYLATE	141-32-2
N-BUTYL ALCOHOL	71-36-3
SEC-BUTYL ALCOHOL	78-92-2
CARBON DIOXIDE	124-38-9
CARBON DISULPHIDE	75-15-0
CARBON MONOXIDE	630-08-0
CARBON TETRACHLORIDE	56-23-5
CFC-11	75-69-4
CFC-114	76-14-2
CFC-115	76-15-3
CFC-12	75-71-8
CFC-13	75-72-9
CHLORINE	7782-50-5
CHLOROBENZENE	108-90-7
CHLOROETHANE	75-00-3
CHLOROFORM	67-66-3
CHLOROMETHANE	74-87-3
CHROMIUM	NA - 04
COPPER	NA - 06
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
CYCLOHEXANOL	108-93-0
O-DICHLOROBENZENE	95-50-1

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Basic Organic Chemical Manufacturing (NAICS Code: 325190)

Contaminant	CAS
P-DICHLOROBENZENE	106-46-7
1,1-DICHLOROETHANE	75-34-3
1,2-DICHLOROETHANE	107-06-2
DICHLOROMETHANE	75-09-2
EPICHLOROHYDRIN	106-89-8
ETHYL ACRYLATE	140-88-5
ETHYL ETHER	60-29-7
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
ETHYLENE GLYCOL	107-21-1
ETHYLENE OXIDE	75-21-8
FORMALDEHYDE	50-00-0
GLYCOL ETHERS (MISC.)	N/A - M04
HCFC-22	75-45-6
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
HYDROGEN CYANIDE	74-90-8
IRON	7439-89-6
ISOPROPYL ALCOHOL	67-63-0
LEAD	NA - 08
MANGANESE	NA - 09
METHANE	74-82-8
METHANOL	67-56-1
METHYL ISOBUTYL KETONE	108-10-1
METHYL METHACRYLATE	80-62-6
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
NITROUS OXIDE	10024-97-2
PHENOL	108-95-2
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PROPYLENE	115-07-1
PROPYLENE OXIDE	75-56-9

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Basic Organic Chemical Manufacturing (NAICS Code: 325190)

Contaminant	CAS
STYRENE	100-42-5
SULPHUR DIOXIDE	7446-09-5
TETRACHLOROETHYLENE	127-18-4
TITANIUM	7440-32-6
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
TRICHLOROETHYLENE	79-01-6
VANADIUM	7440-62-2
VINYL ACETATE	108-05-4
VINYL CHLORIDE	75-01-4
VINYLIDENE CHLORIDE	75-35-4
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6
P-XYLENE	106-42-3
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Resin and Synthetic Rubber Manufacturing (NAICS Code: 325210)

Contaminant	CAS
ACETYLENE	74-86-2
ACRYLONITRILE	107-13-1
BENZENE	71-43-2
1,3-BUTADIENE	106-99-0
CFC-11	75-69-4
CFC-114	76-14-2
CFC-115	76-15-3
CFC-12	75-71-8
DICHLOROMETHANE	75-09-2
EPICHLOROHYDRIN	106-89-8
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
FORMALDEHYDE	50-00-0
HCFC-22	75-45-6
N-HEXANE	110-54-3
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHENOL	108-95-2
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PROPYLENE	115-07-1
STYRENE	100-42-5
SULPHUR DIOXIDE	7446-09-5
TOLUENE	108-88-3
TRICHLOROETHYLENE	79-01-6
VINYL CHLORIDE	75-01-4
VINYLIDENE CHLORIDE	75-35-4
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Artificial and Synthetic Fibres and Filaments Manufacturing (NAICS Code: 325220)

Contaminant	CAS
BENZENE	71-43-2
CARBON DISULPHIDE	75-15-0
CFC-11	75-69-4
CFC-114	76-14-2
CFC-115	76-15-3
CFC-12	75-71-8
HCFC-22	75-45-6
HYDROGEN SULPHIDE	7783-06-4
NITROBENZENE	98-95-3
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
STYRENE	100-42-5
TOTAL REDUCED SULPHUR (TRS)	N/A - M14
VINYL CHLORIDE	75-01-4
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Chemical Fertilizer (except Potash) Manufacturing (NAICS Code: 325313)

Contaminant	CAS
ALUMINUM	7429-90-5
AMMONIA (TOTAL)	NA - 16
ANTIMONY	NA - 01
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CARBON DIOXIDE	124-38-9
CARBON MONOXIDE	630-08-0
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
FORMALDEHYDE	50-00-0
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
NITRIC ACID	7697-37-2
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
NITROUS OXIDE	10024-97-2
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
TIN	7440-31-5
TITANIUM	7440-32-6
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Mixed Fertilizer Manufacturing (NAICS Code: 325314)

Contaminant	CAS
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Pesticide and Other Agricultural Chemical Manufacturing (NAICS Code: 325320)

Contaminant	CAS
BENZENE	71-43-2
N-HEXANE	110-54-3
MINERAL SPIRITS GROUP #1	N/A - M06
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
TOLUENE	108-88-3
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Pharmaceutical and Medicine Manufacturing (NAICS Code: 325410)

Contaminant	CAS
DICHLOROMETHANE	75-09-2
PHENOL	108-95-2
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Paint and Coating Manufacturing (NAICS Code: 325510)

Contaminant	CAS
ACETONE	67-64-1
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
ETHYLBENZENE	100-41-4
N-HEPTANE	142-82-5
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
STYRENE	100-42-5
TOLUENE	108-88-3
1,2,4-TRIMETHYLBENZENE	95-63-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Adhesive Manufacturing (NAICS Code: 325520)

Contaminant	CAS
BROMINE	7726-95-6
CADMIUM	NA - 03
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
TITANIUM	7440-32-6
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Soap and Cleaning Compound Manufacturing (NAICS Code: 325610)

Contaminant	CAS
CHLOROBENZENE	108-90-7
CUMENE	98-82-8
ETHYLBENZENE	100-41-4
MINERAL SPIRITS GROUP #1	N/A - M06
NAPHTHALENE	91-20-3
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
TETRACHLOROETHYLENE	127-18-4
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Toilet Preparation Manufacturing (NAICS Code: 325620)

Contaminant	CAS
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Printing Ink Manufacturing (NAICS Code: 325910)

Contaminant	CAS
ACETONE	67-64-1
N-BUTYL ALCOHOL	71-36-3
CYCLOHEXANE	110-82-7
ETHYLBENZENE	100-41-4
ISOPROPYL ALCOHOL	67-63-0
METHANOL	67-56-1
METHYL ETHYL KETONE	78-93-3
MINERAL SPIRITS GROUP #1	N/A - M06
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Explosives Manufacturing (NAICS Code: 325920)

Contaminant	CAS
BENZENE	71-43-2
ETHYLENE	74-85-1
METHANE	74-82-8
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PROPYLENE	115-07-1
SULPHUR DIOXIDE	7446-09-5
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Custom Compounding of Purchased Resins (NAICS Code: 325991)	
Contaminant	**CAS**
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

All Other Miscellaneous Chemical Product Manufacturing (NAICS Code: 325999)

Contaminant	CAS
CARBON DIOXIDE	124-38-9
CARBON MONOXIDE	630-08-0
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
LEAD	NA - 08
MANGANESE	NA - 09
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Unsupported Plastic Bag Manufacturing (NAICS Code: 326111)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Unsupported Plastic Film and Sheet Manufacturing (NAICS Code: 326114)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Unsupported Plastic Profile Shape Manufacturing (NAICS Code: 326121)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Plastic Pipe and Pipe Fitting Manufacturing (NAICS Code: 326122)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Laminated Plastic Plate, Sheet and Shape Manufacturing (NAICS Code: 326130)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Polystyrene Foam Product Manufacturing (NAICS Code: 326140)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Urethane and Other Foam Product (except Polystyrene) Manufacturing (NAICS Code: 326150)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Plastic Bottle Manufacturing (NAICS Code: 326160)	
Contaminant	**CAS**
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Plastic Plumbing Fixture Manufacturing (NAICS Code: 326191)	
Contaminant	**CAS**
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Motor Vehicle Plastic Parts Manufacturing (NAICS Code: 326193)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

All Other Plastic Product Manufacturing (NAICS Code: 326198)

Contaminant	CAS
ACETIC ACID	64-19-7
ACETONE	67-64-1
ACETOPHENONE	98-86-2
BENZENE	71-43-2
2-BUTOXYETHANOL	111-76-2
I-BUTYL ALCOHOL	78-83-1
N-BUTYL ALCOHOL	71-36-3
SEC-BUTYL ALCOHOL	78-92-2
CHLOROBENZENE	108-90-7
CHLOROFORM	67-66-3
CRESOL	1319-77-3
CYCLOHEXANE	110-82-7
DIMETHYL PHENOL	1300-71-6
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYL ETHER	60-29-7
ETHYLBENZENE	100-41-4
FORMALDEHYDE	50-00-0
FORMIC ACID	64-18-6
GLYCOL ETHERS (MISC.)	N/A - M04
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
ISOPROPYL ALCOHOL	67-63-0
METHANOL	67-56-1
2-METHOXYETHANOL	109-86-4
2-METHOXYETHYL ACETATE	110-49-6
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
MINERAL SPIRITS GROUP #1	N/A - M06
MINERAL SPIRITS GROUP #2	N/A - M17
TETRACHLOROETHYLENE	127-18-4
TOLUENE	108-88-3
TRICHLOROETHYLENE	79-01-6
TRIETHYLAMINE	121-44-8

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

All Other Plastic Product Manufacturing (NAICS Code: 326198)

Contaminant	CAS
1,2,4-TRIMETHYLBENZENE	95-63-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Tire Manufacturing (NAICS Code: 326210)

Contaminant	CAS
BENZENE	71-43-2
CYCLOHEXANE	110-82-7
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
TOLUENE	108-88-3
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Rubber and Plastic Hose and Belting Manufacturing (NAICS Code: 326220)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Rubber Product Manufacturing (NAICS Code: 326290)

Contaminant	CAS
BENZENE	71-43-2
1,3-BUTADIENE	106-99-0
STYRENE	100-42-5
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Pottery, Ceramics and Plumbing Fixture Manufacturing (NAICS Code: 327110)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Clay Building Material and Refractory Manufacturing (NAICS Code: 327120)

Contaminant	CAS
CARBON DIOXIDE	124-38-9
CHROMIUM	NA - 04
CHROMIUM (VI) COMPOUNDS	18540-29-9
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SULPHUR DIOXIDE	7446-09-5
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Glass Manufacturing (NAICS Code: 327214)

Contaminant	CAS
ALUMINUM	7429-90-5
ANTIMONY	NA - 01
ARSENIC	NA - 02
BERYLLIUM	7440-41-7
BORON	7440-42-8
BROMINE	7726-95-6
CADMIUM	NA - 03
CARBON MONOXIDE	630-08-0
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
FLUORINE	7782-41-4
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
METHANE	74-82-8
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
TIN	7440-31-5
TITANIUM	7440-32-6
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Glass Product Manufacturing from Purchased Glass (NAICS Code: 327215)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Cement Manufacturing (NAICS Code: 327310)

Contaminant	CAS
ACENAPHTHYLENE	208-96-8
ACETONE	67-64-1
ALUMINUM	7429-90-5
AMMONIA (TOTAL)	NA - 16
ARSENIC	NA - 02
BENZ(A)ANTHRACENE	56-55-3
BENZENE	71-43-2
BENZO(A)PHENANTHRENE (CHRYSENE)	218-01-9
BENZO(A)PYRENE	50-32-8
BENZO(B)FLUORANTHENE	205-99-2
BENZO(G,H,I)PERYLENE	191-24-2
BENZO(K)FLUORANTHENE	207-08-9
BERYLLIUM	7440-41-7
BIPHENYL	92-52-4
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7
BORON	7440-42-8
BROMINE	7726-95-6
BROMOMETHANE	74-83-9
CADMIUM	NA - 03
CARBON DIOXIDE	124-38-9
CARBON DISULPHIDE	75-15-0
CARBON MONOXIDE	630-08-0
CHLORINE	7782-50-5
CHLOROBENZENE	108-90-7
CHLOROMETHANE	74-87-3
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
DIBENZO(A,H)ANTHRACENE	53-70-3
DIBUTYL PHTHALATE	84-74-2
DICHLOROMETHANE	75-09-2
ETHYLBENZENE	100-41-4
FLUORANTHENE	206-44-0
FLUORENE	86-73-7
FLUORINE	7782-41-4
FORMALDEHYDE	50-00-0

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Cement Manufacturing (NAICS Code: 327310)

Contaminant	CAS
HYDROCHLORIC ACID	7647-01-0
INDENO(1,2,3-C,D)PYRENE	193-39-5
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
METHYL ETHYL KETONE	78-93-3
NAPHTHALENE	91-20-3
NICKEL	NA - 11
NITRIC ACID	7697-37-2
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHENANTHRENE	85-01-8
PHENOL	108-95-2
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
PYRENE	129-00-0
SELENIUM	NA - 12
SILVER	NA - 13
STYRENE	100-42-5
SULPHUR DIOXIDE	7446-09-5
TIN	7440-31-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Ready-Mix Concrete Manufacturing (NAICS Code: 327320)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Concrete Pipe, Brick and Block Manufacturing (NAICS Code: 327330)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Concrete Product Manufacturing (NAICS Code: 327390)	
Contaminant	**CAS**
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Lime Manufacturing (NAICS Code: 327410)

Contaminant	CAS
ACETYLENE	74-86-2
BENZENE	71-43-2
CARBON DIOXIDE	124-38-9
CARBON MONOXIDE	630-08-0
CARBON TETRACHLORIDE	56-23-5
CHLOROFORM	67-66-3
1,2-DICHLOROETHANE	107-06-2
DICHLOROMETHANE	75-09-2
ETHYLBENZENE	100-41-4
N-HEXANE	110-54-3
MERCURY	NA - 10
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PROPYLENE	115-07-1
SULPHUR DIOXIDE	7446-09-5
TETRACHLOROETHYLENE	127-18-4
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
TRICHLOROETHYLENE	79-01-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Gypsum Product Manufacturing (NAICS Code: 327420)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CARBON DIOXIDE	124-38-9
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
SILVER	NA - 13
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Abrasive Product Manufacturing (NAICS Code: 327910)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

All Other Non-Metallic Mineral Product Manufacturing (NAICS Code: 327990)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Iron and Steel Mills and Ferro-Alloy Manufacturing (NAICS Code: 331110)

Contaminant	CAS
ACETYLENE	74-86-2
ACROLEIN	107-02-8
ALUMINUM	7429-90-5
AMMONIA (TOTAL)	NA - 16
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZENE	71-43-2
BENZO(A)PYRENE	50-32-8
BROMINE	7726-95-6
1,3-BUTADIENE	106-99-0
CADMIUM	NA - 03
CARBON MONOXIDE	630-08-0
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COBALT	NA - 05
COKE OVEN EMISSIONS	N/A - M02
COPPER	NA - 06
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
FLUORINE	7782-41-4
FORMALDEHYDE	50-00-0
FURFURYL ALCOHOL	98-00-0
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
HYDROCHLORIC ACID	7647-01-0
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
METHANE	74-82-8
NAPHTHALENE	91-20-3
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHENOL	108-95-2

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Iron and Steel Mills and Ferro-Alloy Manufacturing (NAICS Code: 331110)

Contaminant	CAS
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PROPYLENE	115-07-1
SELENIUM	NA - 12
SILVER	NA - 13
STYRENE	100-42-5
SULPHUR DIOXIDE	7446-09-5
TIN	7440-31-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
M-XYLENE	108-38-3
O-XYLENE	95-47-6
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Iron and Steel Pipes and Tubes Manufacturing from Purchased Steel (NAICS Code: 331210)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Cold-Rolled Steel Shape Manufacturing (NAICS Code: 331221)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Steel Wire Drawing (NAICS Code: 331222)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Primary Production of Alumina and Aluminum (NAICS Code: 331313)

Contaminant	CAS
ACENAPHTHENE	83-32-9
ACENAPHTHYLENE	208-96-8
ALUMINUM	7429-90-5
ANTHRACENE	120-12-7
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZ(A)ANTHRACENE	56-55-3
BENZENE	71-43-2
BENZO(A)PHENANTHRENE (CHRYSENE)	218-01-9
BENZO(A)PYRENE	50-32-8
BORON	7440-42-8
BROMINE	7726-95-6
CADMIUM	NA - 03
CARBON DIOXIDE	124-38-9
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
ETHYLBENZENE	100-41-4
FLUORANTHENE	206-44-0
FLUORENE	86-73-7
FLUORINE	7782-41-4
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
HYDROGEN FLUORIDE	7664-39-3
IRON	7439-89-6
ISOPRENE	78-79-5
LEAD	NA - 08
MANGANESE	NA - 09
NAPHTHALENE	91-20-3
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHENANTHRENE	85-01-8
PHENOL	108-95-2
PHOSPHORUS	7723-14-0

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Primary Production of Alumina and Aluminum (NAICS Code: 331313)	
Contaminant	**CAS**
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PYRENE	129-00-0
SELENIUM	NA - 12
SULPHUR DIOXIDE	7446-09-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
1,2,4-TRIMETHYLBENZENE	95-63-6
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6
P-XYLENE	106-42-3
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Aluminum Rolling, Drawing, Extruding and Alloying (NAICS Code: 331317)

Contaminant	CAS
ACETALDEHYDE	75-07-0
ALUMINUM	7429-90-5
ANILINE	62-53-3
ANTIMONY	NA - 01
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
FORMALDEHYDE	50-00-0
HYDROCHLORIC ACID	7647-01-0
HYDROGEN FLUORIDE	7664-39-3
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
METHYLENEBIS(PHENYLISOCYANATE)	101-68-8
P,P'-METHYLENEDIANILINE	101-77-9
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
SELENIUM	NA - 12
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
TIN	7440-31-5
TITANIUM	7440-32-6
VANADIUM	7440-62-2

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Aluminum Rolling, Drawing, Extruding and Alloying (NAICS Code: 331317)

Contaminant	CAS
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Non-Ferrous Metal (except Aluminum) Smelting and Refining (NAICS Code: 331410)

Contaminant	CAS
ALUMINUM	7429-90-5
ANTIMONY	NA - 01
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
TIN	7440-31-5
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Copper Rolling, Drawing, Extruding and Alloying (NAICS Code: 331420)

Contaminant	CAS
ACETIC ACID	64-19-7
ACETONE	67-64-1
ACETOPHENONE	98-86-2
2-BUTOXYETHANOL	111-76-2
I-BUTYL ALCOHOL	78-83-1
N-BUTYL ALCOHOL	71-36-3
SEC-BUTYL ALCOHOL	78-92-2
CHLOROBENZENE	108-90-7
CHLOROFORM	67-66-3
CRESOL	1319-77-3
CYCLOHEXANE	110-82-7
DIMETHYL PHENOL	1300-71-6
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYL ETHER	60-29-7
ETHYLBENZENE	100-41-4
FORMALDEHYDE	50-00-0
FORMIC ACID	64-18-6
GLYCOL ETHERS (MISC.)	N/A - M04
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
ISOPROPYL ALCOHOL	67-63-0
METHANOL	67-56-1
2-METHOXYETHANOL	109-86-4
2-METHOXYETHYL ACETATE	110-49-6
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
MINERAL SPIRITS GROUP #1	N/A - M06
MINERAL SPIRITS GROUP #2	N/A - M17
TETRACHLOROETHYLENE	127-18-4
TOLUENE	108-88-3
TRICHLOROETHYLENE	79-01-6
TRIETHYLAMINE	121-44-8

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Copper Rolling, Drawing, Extruding and Alloying (NAICS Code: 331420)

Contaminant	CAS
1,2,4-TRIMETHYLBENZENE	95-63-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Non-Ferrous Metal (except Copper and Aluminum) Rolling, Drawing, Extruding and Alloying (NAICS Code: 331490)

Contaminant	CAS
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Iron Foundries (NAICS Code: 331511)

Contaminant	CAS
ACROLEIN	107-02-8
ALUMINUM	7429-90-5
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZ(A)ANTHRACENE	56-55-3
BENZENE	71-43-2
BENZO(A)PHENANTHRENE (CHRYSENE)	218-01-9
BENZO(A)PYRENE	50-32-8
BROMINE	7726-95-6
CADMIUM	NA - 03
CARBON MONOXIDE	630-08-0
CHLORINE	7782-50-5
CHROMIUM	NA - 04
CHROMIUM (VI) COMPOUNDS	18540-29-9
COBALT	NA - 05
COPPER	NA - 06
FLUORANTHENE	206-44-0
FORMALDEHYDE	50-00-0
FURFURYL ALCOHOL	98-00-0
HYDROCHLORIC ACID	7647-01-0
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NAPHTHALENE	91-20-3
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHENOL	108-95-2
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
SELENIUM	NA - 12
SULPHUR DIOXIDE	7446-09-5

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Iron Foundries (NAICS Code: 331511)

Contaminant	CAS
2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (TEQ)	1746-01-6
2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	51207-31-9
TITANIUM	7440-32-6
TOLUENE	108-88-3
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
M-XYLENE	108-38-3
O-XYLENE	95-47-6
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Steel Foundries (NAICS Code: 331514)

Contaminant	CAS
ACROLEIN	107-02-8
ALUMINUM	7429-90-5
ANTIMONY	NA - 01
BENZENE	71-43-2
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
FORMALDEHYDE	50-00-0
FURFURYL ALCOHOL	98-00-0
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NAPHTHALENE	91-20-3
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHENOL	108-95-2
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
TIN	7440-31-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
M-XYLENE	108-38-3

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Steel Foundries (NAICS Code: 331514)

Contaminant	CAS
O-XYLENE	95-47-6
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Non-Ferrous Die-Casting Foundries (NAICS Code: 331523)

Contaminant	CAS
ACETALDEHYDE	75-07-0
ACETOPHENONE	98-86-2
ACETYLENE	74-86-2
ACROLEIN	107-02-8
ALUMINUM	7429-90-5
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZENE	71-43-2
BERYLLIUM	7440-41-7
BIPHENYL	92-52-4
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7
BROMINE	7726-95-6
BROMOMETHANE	74-83-9
1,3-BUTADIENE	106-99-0
CADMIUM	NA - 03
CARBON DISULPHIDE	75-15-0
CARBON MONOXIDE	630-08-0
CHLORINE	7782-50-5
CHLOROBENZENE	108-90-7
CHLOROMETHANE	74-87-3
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
DICHLOROMETHANE	75-09-2
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
FORMALDEHYDE	50-00-0
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Non-Ferrous Die-Casting Foundries (NAICS Code: 331523)

Contaminant	CAS
METHANE	74-82-8
METHYL ETHYL KETONE	78-93-3
NAPHTHALENE	91-20-3
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PHENOL	108-95-2
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
PROPYLENE	115-07-1
SELENIUM	NA - 12
SILVER	NA - 13
STYRENE	100-42-5
SULPHUR DIOXIDE	7446-09-5
2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (TEQ)	1746-01-6
2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	51207-31-9
TIN	7440-31-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Non-Ferrous Foundries (except Die-Casting) (NAICS Code: 331529)

Contaminant	CAS
ARSENIC	NA - 02
BENZENE	71-43-2
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
COPPER	NA - 06
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
METHANE	74-82-8
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
SELENIUM	NA - 12
SULPHUR DIOXIDE	7446-09-5
2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (TEQ)	1746-01-6
2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	51207-31-9
TIN	7440-31-5
TOLUENE	108-88-3
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Forging (NAICS Code: 332113)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Stamping (NAICS Code: 332118)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Cutlery and Hand Tool Manufacturing (NAICS Code: 332210)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Prefabricated Metal Building and Component Manufacturing (NAICS Code: 332311)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Concrete Reinforcing Bar Manufacturing (NAICS Code: 332314)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Plate Work and Fabricated Structural Product Manufacturing (NAICS Code: 332319)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Metal Window and Door Manufacturing (NAICS Code: 332321)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Ornamental and Architectural Metal Products Manufacturing (NAICS Code: 332329)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Power Boiler and Heat Exchanger Manufacturing
(NAICS Code: 332410)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Metal Tank (Heavy Gauge) Manufacturing (NAICS Code: 332420)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Metal Can Manufacturing (NAICS Code: 332431)

Contaminant	CAS
ACETYLENE	74-86-2
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BENZENE	71-43-2
BROMINE	7726-95-6
2-BUTOXYETHANOL	111-76-2
I-BUTYL ALCOHOL	78-83-1
SEC-BUTYL ALCOHOL	78-92-2
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
ETHYLENE GLYCOL	107-21-1
GLYCOL ETHERS (MISC.)	N/A - M04
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
IRON	7439-89-6
ISOPRENE	78-79-5
ISOPROPYL ALCOHOL	67-63-0
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
METHANE	74-82-8
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
MINERAL SPIRITS GROUP #1	N/A - M06
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Metal Can Manufacturing (NAICS Code: 332431)

Contaminant	CAS
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PROPYLENE	115-07-1
SELENIUM	NA - 12
STYRENE	100-42-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
1,2,4-TRIMETHYLBENZENE	95-63-6
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Metal Container Manufacturing (NAICS Code: 332439)

Contaminant	CAS
ACETIC ACID	64-19-7
ACETONE	67-64-1
ACETOPHENONE	98-86-2
ACETYLENE	74-86-2
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BENZENE	71-43-2
BROMINE	7726-95-6
2-BUTOXYETHANOL	111-76-2
I-BUTYL ALCOHOL	78-83-1
N-BUTYL ALCOHOL	71-36-3
SEC-BUTYL ALCOHOL	78-92-2
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHLOROBENZENE	108-90-7
CHLOROFORM	67-66-3
CHROMIUM	NA - 04
COPPER	NA - 06
CRESOL	1319-77-3
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
DIMETHYL PHENOL	1300-71-6
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYL ETHER	60-29-7
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
FORMALDEHYDE	50-00-0
FORMIC ACID	64-18-6
GLYCOL ETHERS (MISC.)	N/A - M04
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
IRON	7439-89-6
ISOPRENE	78-79-5
ISOPROPYL ALCOHOL	67-63-0

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Metal Container Manufacturing (NAICS Code: 332439)

Contaminant	CAS
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
METHANE	74-82-8
METHANOL	67-56-1
2-METHOXYETHANOL	109-86-4
2-METHOXYETHYL ACETATE	110-49-6
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
MINERAL SPIRITS GROUP #1	N/A - M06
MINERAL SPIRITS GROUP #2	N/A - M17
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PROPYLENE	115-07-1
SELENIUM	NA - 12
STYRENE	100-42-5
TETRACHLOROETHYLENE	127-18-4
TITANIUM	7440-32-6
TOLUENE	108-88-3
TRICHLOROETHYLENE	79-01-6
TRIETHYLAMINE	121-44-8
1,2,4-TRIMETHYLBENZENE	95-63-6
VANADIUM	7440-62-2
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Hardware Manufacturing (NAICS Code: 332510)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Spring (Heavy Gauge) Manufacturing (NAICS Code: 332611)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Fabricated Wire Product Manufacturing (NAICS Code: 332619)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Machine Shops (NAICS Code: 332710)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Turned Product and Screw, Nut and Bolt Manufacturing (NAICS Code: 332720)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Coating, Engraving, Heat Treating and Allied Activities (NAICS Code: 332810)

Contaminant	CAS
ACETYLENE	74-86-2
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BENZENE	71-43-2
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
IRON	7439-89-6
ISOPRENE	78-79-5
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
METHANE	74-82-8
NAPHTHALENE	91-20-3
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PROPYLENE	115-07-1
SELENIUM	NA - 12
STYRENE	100-42-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
1,2,4-TRIMETHYLBENZENE	95-63-6
VANADIUM	7440-62-2

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Coating, Engraving, Heat Treating and Allied Activities (NAICS Code: 332810)

Contaminant	CAS
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Metal Valve Manufacturing (NAICS Code: 332910)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Ball and Roller Bearing Manufacturing (NAICS Code: 332991)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

All Other Miscellaneous Fabricated Metal Product Manufacturing (NAICS Code: 332999)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Agricultural Implement Manufacturing (NAICS Code: 333110)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Construction Machinery Manufacturing (NAICS Code: 333120)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Mining and Oil and Gas Field Machinery Manufacturing (NAICS Code: 333130)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Sawmill and Woodworking Machinery Manufacturing (NAICS Code: 333210)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Rubber and Plastics Industry Machinery Manufacturing (NAICS Code: 333220)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Paper Industry Machinery Manufacturing (NAICS Code: 333291)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

All Other Industrial Machinery Manufacturing (NAICS Code: 333299)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Commercial and Service Industry Machinery Manufacturing (NAICS Code: 333310)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing (NAICS Code: 333413)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Heating Equipment and Commercial Refrigeration Equipment Manufacturing (NAICS Code: 333416)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Industrial Mould Manufacturing (NAICS Code: 333511)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Metalworking Machinery Manufacturing (NAICS Code: 333519)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Turbine and Turbine Generator Set Unit Manufacturing (NAICS Code: 333611)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Engine and Power Transmission Equipment Manufacturing (NAICS Code: 333619)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Pump and Compressor Manufacturing (NAICS Code: 333910)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Material Handling Equipment Manufacturing (NAICS Code: 333920)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

All Other General-Purpose Machinery Manufacturing (NAICS Code: 333990)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Computer and Peripheral Equipment Manufacturing (NAICS Code: 334110)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Telephone Apparatus Manufacturing (NAICS Code: 334210)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing (NAICS Code: 334220)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Communications Equipment Manufacturing
(NAICS Code: 334290)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Audio and Video Equipment Manufacturing (NAICS Code: 334310)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Semiconductor and Other Electronic Component Manufacturing (NAICS Code: 334410)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Navigational and Guidance Instruments Manufacturing (NAICS Code: 334511)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Measuring, Medical and Controlling Devices Manufacturing (NAICS Code: 334512)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Manufacturing and Reproducing Magnetic and Optical Media (NAICS Code: 334610)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Electric Lamp Bulb and Parts Manufacturing (NAICS Code: 335110)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Lighting Fixture Manufacturing (NAICS Code: 335120)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Small Electrical Appliance Manufacturing (NAICS Code: 335210)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Major Kitchen Appliance Manufacturing (NAICS Code: 335223)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Major Appliance Manufacturing (NAICS Code: 335229)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Power, Distribution and Specialty Transformers Manufacturing (NAICS Code: 335311)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Motor and Generator Manufacturing (NAICS Code: 335312)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Switchgear and Switchboard, and Relay and Industrial Control Apparatus Manufacturing (NAICS Code: 335315)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Battery Manufacturing (NAICS Code: 335910)

Contaminant	CAS
LEAD	NA - 08
MANGANESE	NA - 09
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Communication and Energy Wire and Cable Manufacturing (NAICS Code: 335920)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Wiring Device Manufacturing (NAICS Code: 335930)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

All Other Electrical Equipment and Component Manufacturing (NAICS Code: 335990)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Automobile and Light-Duty Motor Vehicle Manufacturing (NAICS Code: 336110)

Contaminant	CAS
ACETYLENE	74-86-2
BENZENE	71-43-2
BIPHENYL	92-52-4
BUTYL BENZYL PHTHALATE	85-68-7
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
DIBUTYL PHTHALATE	84-74-2
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
GLYCOL ETHERS (MISC.)	N/A - M04
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
ISOPRENE	78-79-5
NAPHTHALENE	91-20-3
PHTHALIC ANHYDRIDE	85-44-9
PROPYLENE	115-07-1
STYRENE	100-42-5
TOLUENE	108-88-3
1,2,4-TRIMETHYLBENZENE	95-63-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Heavy-Duty Truck Manufacturing (NAICS Code: 336120)

Contaminant	CAS
ACETYLENE	74-86-2
BENZENE	71-43-2
BIPHENYL	92-52-4
BROMINE	7726-95-6
BUTYL BENZYL PHTHALATE	85-68-7
CADMIUM	NA - 03
CHROMIUM	NA - 04
COPPER	NA - 06
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
DIBUTYL PHTHALATE	84-74-2
DICHLOROMETHANE	75-09-2
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
GLYCOL ETHERS (MISC.)	N/A - M04
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
IRON	7439-89-6
ISOPRENE	78-79-5
NAPHTHALENE	91-20-3
NICKEL	NA - 11
PHTHALIC ANHYDRIDE	85-44-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
PROPYLENE	115-07-1
STYRENE	100-42-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
1,2,4-TRIMETHYLBENZENE	95-63-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Motor Vehicle Body Manufacturing (NAICS Code: 336211)

Contaminant	CAS
ACETYLENE	74-86-2
BENZENE	71-43-2
BIPHENYL	92-52-4
BUTYL BENZYL PHTHALATE	85-68-7
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
DIBUTYL PHTHALATE	84-74-2
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
GLYCOL ETHERS (MISC.)	N/A - M04
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
ISOPRENE	78-79-5
NAPHTHALENE	91-20-3
PHTHALIC ANHYDRIDE	85-44-9
PROPYLENE	115-07-1
STYRENE	100-42-5
TOLUENE	108-88-3
1,2,4-TRIMETHYLBENZENE	95-63-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Truck Trailer Manufacturing (NAICS Code: 336212)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Motor Home, Travel Trailer and Camper Manufacturing (NAICS Code: 336215)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Motor Vehicle Gasoline Engine and Engine Parts Manufacturing (NAICS Code: 336310)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Motor Vehicle Electrical and Electronic Equipment Manufacturing (NAICS Code: 336320)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing (NAICS Code: 336330)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Motor Vehicle Brake System Manufacturing (NAICS Code: 336340)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Motor Vehicle Transmission and Power Train Parts Manufacturing (NAICS Code: 336350)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Motor Vehicle Seating and Interior Trim Manufacturing (NAICS Code: 336360)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Motor Vehicle Metal Stamping (NAICS Code: 336370)

Contaminant	CAS
ALUMINUM	7429-90-5
ARSENIC	NA - 02
BROMINE	7726-95-6
CADMIUM	NA - 03
CHLORINE	7782-50-5
CHROMIUM	NA - 04
COPPER	NA - 06
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
MERCURY	NA - 10
NICKEL	NA - 11
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TITANIUM	7440-32-6
VANADIUM	7440-62-2
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Other Motor Vehicle Parts Manufacturing (NAICS Code: 336390)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Aerospace Product and Parts Manufacturing (NAICS Code: 336410)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Railroad Rolling Stock Manufacturing (NAICS Code: 336510)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Ship Building and Repairing (NAICS Code: 336611)

Contaminant	CAS
ACETONE	67-64-1
2-BUTOXYETHANOL	111-76-2
I-BUTYL ALCOHOL	78-83-1
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYLENE GLYCOL	107-21-1
GLYCOL ETHERS (MISC.)	N/A - M04
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
MINERAL SPIRITS GROUP #1	N/A - M06
TOLUENE	108-88-3
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Boat Building (NAICS Code: 336612)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Other Transportation Equipment Manufacturing (NAICS Code: 336990)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Wood Kitchen Cabinet and Counter Top Manufacturing (NAICS Code: 337110)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Upholstered Household Furniture Manufacturing (NAICS Code: 337121)

Contaminant	CAS
ACETALDEHYDE	75-07-0
ACETONE	67-64-1
2-BUTOXYETHANOL	111-76-2
I-BUTYL ALCOHOL	78-83-1
SEC-BUTYL ALCOHOL	78-92-2
BUTYRALDEHYDE	123-72-8
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYLENE GLYCOL	107-21-1
FORMALDEHYDE	50-00-0
GLYCOL ETHERS (MISC.)	N/A - M04
ISOPROPYL ALCOHOL	67-63-0
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
MINERAL SPIRITS GROUP #1	N/A - M06
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Wood Household Furniture Manufacturing
(NAICS Code: 337123)

Contaminant	CAS
ACETALDEHYDE	75-07-0
BUTYRALDEHYDE	123-72-8
FORMALDEHYDE	50-00-0
METHYL ETHYL KETONE	78-93-3
1,1,1-TRICHLOROETHANE	71-55-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Household Furniture (except Wood and Upholstered) Manufacturing (NAICS Code: 337126)

Contaminant	CAS
ACETALDEHYDE	75-07-0
ACETONE	67-64-1
BENZENE	71-43-2
2-BUTOXYETHANOL	111-76-2
I-BUTYL ALCOHOL	78-83-1
N-BUTYL ALCOHOL	71-36-3
SEC-BUTYL ALCOHOL	78-92-2
BUTYRALDEHYDE	123-72-8
CHLOROETHANE	75-00-3
CHLOROMETHANE	74-87-3
DICHLOROMETHANE	75-09-2
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYLENE GLYCOL	107-21-1
FORMALDEHYDE	50-00-0
GLYCOL ETHERS (MISC.)	N/A - M04
ISOPROPYL ALCOHOL	67-63-0
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
MINERAL SPIRITS GROUP #1	N/A - M06
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
VINYL ACETATE	108-05-4
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Institutional Furniture Manufacturing (NAICS Code: 337127)

Contaminant	CAS
ACETALDEHYDE	75-07-0
BUTYRALDEHYDE	123-72-8
FORMALDEHYDE	50-00-0
METHYL ETHYL KETONE	78-93-3
1,1,1-TRICHLOROETHANE	71-55-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Wood Office Furniture, including Custom Architectural Woodwork, Manufacturing (NAICS Code: 337213)

Contaminant	CAS
ACETALDEHYDE	75-07-0
ACETONE	67-64-1
2-BUTOXYETHANOL	111-76-2
I-BUTYL ALCOHOL	78-83-1
SEC-BUTYL ALCOHOL	78-92-2
BUTYRALDEHYDE	123-72-8
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYLENE GLYCOL	107-21-1
FORMALDEHYDE	50-00-0
GLYCOL ETHERS (MISC.)	N/A - M04
ISOPROPYL ALCOHOL	67-63-0
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
MINERAL SPIRITS GROUP #1	N/A - M06
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Office Furniture (except Wood) Manufacturing (NAICS Code: 337214)

Contaminant	CAS
ACETALDEHYDE	75-07-0
ACETONE	67-64-1
BENZENE	71-43-2
2-BUTOXYETHANOL	111-76-2
I-BUTYL ALCOHOL	78-83-1
N-BUTYL ALCOHOL	71-36-3
SEC-BUTYL ALCOHOL	78-92-2
BUTYRALDEHYDE	123-72-8
CHLOROETHANE	75-00-3
CHLOROMETHANE	74-87-3
DICHLOROMETHANE	75-09-2
2-ETHOXYETHANOL	110-80-5
2-ETHOXYETHYL ACETATE	111-15-9
ETHYL ACETATE	141-78-6
ETHYLENE GLYCOL	107-21-1
FORMALDEHYDE	50-00-0
GLYCOL ETHERS (MISC.)	N/A - M04
ISOPROPYL ALCOHOL	67-63-0
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
MINERAL SPIRITS GROUP #1	N/A - M06
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
VINYL ACETATE	108-05-4
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Showcase, Partition, Shelving and Locker Manufacturing (NAICS Code: 337215)

Contaminant	CAS
ACETALDEHYDE	75-07-0
BUTYRALDEHYDE	123-72-8
FORMALDEHYDE	50-00-0
METHYL ETHYL KETONE	78-93-3
1,1,1-TRICHLOROETHANE	71-55-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Mattress Manufacturing (NAICS Code: 337910)

Contaminant	CAS
ACETALDEHYDE	75-07-0
BUTYRALDEHYDE	123-72-8
FORMALDEHYDE	50-00-0
METHYL ETHYL KETONE	78-93-3
1,1,1-TRICHLOROETHANE	71-55-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Blind and Shade Manufacturing (NAICS Code: 337920)

Contaminant	CAS
ACETALDEHYDE	75-07-0
BUTYRALDEHYDE	123-72-8
FORMALDEHYDE	50-00-0
METHYL ETHYL KETONE	78-93-3
1,1,1-TRICHLOROETHANE	71-55-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Medical Equipment and Supplies Manufacturing (NAICS Code: 339110)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Jewellery and Silverware Manufacturing (NAICS Code: 339910)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Sporting and Athletic Goods Manufacturing (NAICS Code: 339920)	
Contaminant	**CAS**
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Doll, Toy and Game Manufacturing (NAICS Code: 339930)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Office Supplies (except Paper) Manufacturing (NAICS Code: 339940)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Sign Manufacturing (NAICS Code: 339950)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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All Other Miscellaneous Manufacturing (NAICS Code: 339990)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Petroleum Product Wholesaler-Distributors (NAICS Code: 412110)

Contaminant	CAS
ACETYLENE	74-86-2
BENZENE	71-43-2
1,3-BUTADIENE	106-99-0
CHLOROBENZENE	108-90-7
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
1,2-DICHLOROETHANE	107-06-2
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
ISOPRENE	78-79-5
METHANE	74-82-8
METHANOL	67-56-1
METHYL TERT-BUTYL ETHER	1634-04-4
NAPHTHALENE	91-20-3
PROPYLENE	115-07-1
STYRENE	100-42-5
TOLUENE	108-88-3
1,1,2-TRICHLOROETHANE	79-00-5
1,2,4-TRIMETHYLBENZENE	95-63-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
M-XYLENE	108-38-3
O-XYLENE	95-47-6
P-XYLENE	106-42-3

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Recyclable Material Wholesaler-Distributors (NAICS Code: 418190)

Contaminant	CAS
LEAD	NA - 08
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Chemical (except Agricultural) and Allied Product Wholesaler-Distributors (NAICS Code: 418410)

Contaminant	CAS
ACETYLENE	74-86-2
BENZENE	71-43-2
1,3-BUTADIENE	106-99-0
CHLOROBENZENE	108-90-7
CUMENE	98-82-8
CYCLOHEXANE	110-82-7
1,2-DICHLOROETHANE	107-06-2
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
N-HEPTANE	142-82-5
N-HEXANE	110-54-3
ISOPRENE	78-79-5
METHANOL	67-56-1
METHYL TERT-BUTYL ETHER	1634-04-4
NAPHTHALENE	91-20-3
PROPYLENE	115-07-1
STYRENE	100-42-5
TOLUENE	108-88-3
1,1,2-TRICHLOROETHANE	79-00-5
1,2,4-TRIMETHYLBENZENE	95-63-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
M-XYLENE	108-38-3
O-XYLENE	95-47-6
P-XYLENE	106-42-3

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Scheduled Air Transportation (NAICS Code: 481110)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Non-Scheduled Chartered Air Transportation (NAICS Code: 481214)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Non-Scheduled Specialty Flying Services (NAICS Code: 481215)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Short-Haul Freight Rail Transportation (NAICS Code: 482112)

Contaminant	CAS
ACETONE	67-64-1
BROMINE	7726-95-6
CHLOROBENZENE	108-90-7
CHLOROFORM	67-66-3
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
CUMENE	98-82-8
O-DICHLOROBENZENE	95-50-1
ETHYLBENZENE	100-41-4
ETHYLENE GLYCOL	107-21-1
FURFURAL	98-01-1
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
METHYL METHACRYLATE	80-62-6
MINERAL SPIRITS GROUP #1	N/A - M06
NAPHTHALENE	91-20-3
NICKEL	NA - 11
PHENOL	108-95-2
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TETRACHLOROETHYLENE	127-18-4
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
TRICHLOROETHYLENE	79-01-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Mainline Freight Rail Transportation (NAICS Code: 482113)

Contaminant	CAS
ACETONE	67-64-1
BROMINE	7726-95-6
CHLOROBENZENE	108-90-7
CHLOROFORM	67-66-3
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
CUMENE	98-82-8
O-DICHLOROBENZENE	95-50-1
ETHYLBENZENE	100-41-4
ETHYLENE GLYCOL	107-21-1
FURFURAL	98-01-1
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
METHYL METHACRYLATE	80-62-6
MINERAL SPIRITS GROUP #1	N/A - M06
NAPHTHALENE	91-20-3
NICKEL	NA - 11
PHENOL	108-95-2
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TETRACHLOROETHYLENE	127-18-4
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
TRICHLOROETHYLENE	79-01-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Passenger Rail Transportation (NAICS Code: 482114)

Contaminant	CAS
ACETONE	67-64-1
BROMINE	7726-95-6
CHLOROBENZENE	108-90-7
CHLOROFORM	67-66-3
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
CUMENE	98-82-8
O-DICHLOROBENZENE	95-50-1
ETHYLBENZENE	100-41-4
ETHYLENE GLYCOL	107-21-1
FURFURAL	98-01-1
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
METHYL METHACRYLATE	80-62-6
MINERAL SPIRITS GROUP #1	N/A - M06
NAPHTHALENE	91-20-3
NICKEL	NA - 11
PHENOL	108-95-2
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TETRACHLOROETHYLENE	127-18-4
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
TRICHLOROETHYLENE	79-01-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Deep Sea, Coastal and Great Lakes Water Transportation (except by Ferries) (NAICS Code: 483115)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Deep Sea, Coastal and Great Lakes Water Transportation by Ferries (NAICS Code: 483116)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Urban Transit Systems (NAICS Code: 485110)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Interurban and Rural Bus Transportation (NAICS Code: 485210)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Pipeline Transportation of Crude Oil (NAICS Code: 486110)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Pipeline Transportation of Natural Gas (NAICS Code: 486210)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Pipeline Transportation of Refined Petroleum Products (NAICS Code: 486910)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

All Other Pipeline Transportation (NAICS Code: 486990)	
Contaminant	**CAS**
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Air Traffic Control (NAICS Code: 488111)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Airport Operations (NAICS Code: 488119)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Support Activities for Air Transportation (NAICS Code: 488190)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Support Activities for Rail Transportation (NAICS Code: 488210)

Contaminant	CAS
ACETONE	67-64-1
BROMINE	7726-95-6
CHLOROBENZENE	108-90-7
CHLOROFORM	67-66-3
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
CUMENE	98-82-8
O-DICHLOROBENZENE	95-50-1
ETHYLBENZENE	100-41-4
ETHYLENE GLYCOL	107-21-1
FURFURAL	98-01-1
IRON	7439-89-6
LEAD	NA - 08
MANGANESE	NA - 09
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
METHYL METHACRYLATE	80-62-6
MINERAL SPIRITS GROUP #1	N/A - M06
NAPHTHALENE	91-20-3
NICKEL	NA - 11
PHENOL	108-95-2
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
SELENIUM	NA - 12
TETRACHLOROETHYLENE	127-18-4
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
TRICHLOROETHYLENE	79-01-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Support Activities for Water Transportation (NAICS Code: 488390)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Support Activities for Road Transportation (NAICS Code: 488490)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Other Freight Transportation Arrangement (NAICS Code: 488519)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Lessors of Non-Residential Buildings (except Mini-Warehouses) (NAICS Code: 531120)

Contaminant	CAS
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
SULPHUR DIOXIDE	7446-09-5

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Testing Laboratories (NAICS Code: 541380)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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All Other Professional, Scientific and Technical Services (NAICS Code: 541990)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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All Other Support Services (NAICS Code: 561990)	
Contaminant	**CAS**
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Waste Collection (NAICS Code: 562110)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Waste Treatment and Disposal (NAICS Code: 562210)

Contaminant	CAS
ACETALDEHYDE	75-07-0
ACETONE	67-64-1
ACETONITRILE	75-05-8
ACRYLONITRILE	107-13-1
ALUMINUM	7429-90-5
ANTIMONY	NA - 01
ARSENIC	NA - 02
BENZ(A)ANTHRACENE	56-55-3
BENZENE	71-43-2
BENZO(A)PYRENE	50-32-8
BERYLLIUM	7440-41-7
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7
CADMIUM	NA - 03
CARBON DIOXIDE	124-38-9
CARBON DISULPHIDE	75-15-0
CARBON MONOXIDE	630-08-0
CARBON TETRACHLORIDE	56-23-5
CFC-11	75-69-4
CFC-12	75-71-8
CHLOROBENZENE	108-90-7
CHLOROETHANE	75-00-3
CHLOROFORM	67-66-3
CHLOROMETHANE	74-87-3
CHROMIUM	NA - 04
COBALT	NA - 05
COPPER	NA - 06
O-DICHLOROBENZENE	95-50-1
P-DICHLOROBENZENE	106-46-7
1,1-DICHLOROETHANE	75-34-3
1,2-DICHLOROETHANE	107-06-2
DICHLOROMETHANE	75-09-2
1,2-DICHLOROPROPANE	78-87-5
DIMETHYL SULPHIDE	75-18-3
4,6-DINITRO-O-CRESOL	534-52-1
ETHYLBENZENE	100-41-4

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Waste Treatment and Disposal (NAICS Code: 562210)

Contaminant	CAS
ETHYLENE	74-85-1
FLUORANTHENE	206-44-0
FORMALDEHYDE	50-00-0
HCFC-22	75-45-6
N-HEXANE	110-54-3
HYDROCHLORIC ACID	7647-01-0
HYDROGEN FLUORIDE	7664-39-3
HYDROGEN SULPHIDE	2148875
LEAD	NA - 08
MANGANESE	NA - 09
MERCAPTANS (AS METHYL MERCAPTAN) - TOTAL	74-93-1
MERCURY	NA - 10
METHANE	74-82-8
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
NAPHTHALENE	91-20-3
NICKEL	NA - 11
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
P-NITROPHENOL	100-02-7
NITROUS OXIDE	10024-97-2
PENTACHLOROPHENOL (PCP)	87-86-5
PHENOL	108-95-2
PHOSPHORUS	7723-14-0
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
PROPYLENE	115-07-1
SELENIUM	NA - 12
SILVER	NA - 13
SULPHUR DIOXIDE	7446-09-5
SULPHURIC ACID	7664-93-9
2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (TEQ)	1746-01-6

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

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Waste Treatment and Disposal (NAICS Code: 562210)

Contaminant	CAS
2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	51207-31-9
1,1,2,2-TETRACHLOROETHANE	79-34-5
TETRACHLOROETHYLENE	127-18-4
TIN	7440-31-5
TITANIUM	7440-32-6
TOLUENE	108-88-3
TOTAL REDUCED SULPHUR (TRS)	N/A - M14
1,2,4-TRICHLOROBENZENE	120-82-1
1,1,1-TRICHLOROETHANE	71-55-6
1,1,2-TRICHLOROETHANE	79-00-5
TRICHLOROETHYLENE	79-01-6
VANADIUM	7440-62-2
VINYL CHLORIDE	75-01-4
VINYLIDENE CHLORIDE	75-35-4
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
ZINC	NA - 14

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Remediation Services (NAICS Code: 562910)

Contaminant	CAS
ACETONE	67-64-1
ACETONITRILE	75-05-8
ACRYLONITRILE	107-13-1
ARSENIC	NA - 02
BENZENE	71-43-2
CARBON DIOXIDE	124-38-9
CARBON DISULPHIDE	75-15-0
CARBON MONOXIDE	630-08-0
CARBON TETRACHLORIDE	56-23-5
CFC-11	75-69-4
CFC-12	75-71-8
CHLOROBENZENE	108-90-7
CHLOROETHANE	75-00-3
CHLOROFORM	67-66-3
CHLOROMETHANE	74-87-3
1,1-DICHLOROETHANE	75-34-3
1,2-DICHLOROETHANE	107-06-2
DICHLOROMETHANE	75-09-2
1,2-DICHLOROPROPANE	78-87-5
DIMETHYL SULPHIDE	75-18-3
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
HCFC-22	75-45-6
N-HEXANE	110-54-3
HYDROCHLORIC ACID	7647-01-0
HYDROGEN FLUORIDE	7664-39-3
HYDROGEN SULPHIDE	2148875
MERCAPTANS (AS METHYL MERCAPTAN) - TOTAL	74-93-1
MERCURY	NA - 10
METHANE	74-82-8
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Remediation Services (NAICS Code: 562910)

Contaminant	CAS
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
PROPYLENE	115-07-1
2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	51207-31-9
1,1,2,2-TETRACHLOROETHANE	79-34-5
TETRACHLOROETHYLENE	127-18-4
TOLUENE	108-88-3
TOTAL REDUCED SULPHUR (TRS)	N/A - M14
1,2,4-TRICHLOROBENZENE	120-82-1
1,1,1-TRICHLOROETHANE	71-55-6
1,1,2-TRICHLOROETHANE	79-00-5
TRICHLOROETHYLENE	79-01-6
VINYL CHLORIDE	75-01-4
VINYLIDENE CHLORIDE	75-35-4
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Material Recovery Facilities (NAICS Code: 562920)

Contaminant	CAS
ACETONE	67-64-1
ACETONITRILE	75-05-8
ACRYLONITRILE	107-13-1
ARSENIC	NA - 02
BENZENE	71-43-2
CARBON DIOXIDE	124-38-9
CARBON DISULPHIDE	75-15-0
CARBON MONOXIDE	630-08-0
CARBON TETRACHLORIDE	56-23-5
CFC-11	75-69-4
CFC-12	75-71-8
CHLOROBENZENE	108-90-7
CHLOROETHANE	75-00-3
CHLOROFORM	67-66-3
CHLOROMETHANE	74-87-3
1,1-DICHLOROETHANE	75-34-3
1,2-DICHLOROETHANE	107-06-2
DICHLOROMETHANE	75-09-2
1,2-DICHLOROPROPANE	78-87-5
DIMETHYL SULPHIDE	75-18-3
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
HCFC-22	75-45-6
N-HEXANE	110-54-3
HYDROCHLORIC ACID	7647-01-0
HYDROGEN FLUORIDE	7664-39-3
HYDROGEN SULPHIDE	2148875
MERCAPTANS (AS METHYL MERCAPTAN) - TOTAL	74-93-1
MERCURY	NA - 10
METHANE	74-82-8
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Material Recovery Facilities (NAICS Code: 562920)

Contaminant	CAS
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
PROPYLENE	115-07-1
2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	51207-31-9
1,1,2,2-TETRACHLOROETHANE	79-34-5
TETRACHLOROETHYLENE	127-18-4
TOLUENE	108-88-3
TOTAL REDUCED SULPHUR (TRS)	N/A - M14
1,2,4-TRICHLOROBENZENE	120-82-1
1,1,1-TRICHLOROETHANE	71-55-6
1,1,2-TRICHLOROETHANE	79-00-5
TRICHLOROETHYLENE	79-01-6
VINYL CHLORIDE	75-01-4
VINYLIDENE CHLORIDE	75-35-4
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

All Other Waste Management Services (NAICS Code: 562990)

Contaminant	CAS
ACETONE	67-64-1
ACETONITRILE	75-05-8
ACRYLONITRILE	107-13-1
ARSENIC	NA - 02
BENZENE	71-43-2
CARBON DIOXIDE	124-38-9
CARBON DISULPHIDE	75-15-0
CARBON MONOXIDE	630-08-0
CARBON TETRACHLORIDE	56-23-5
CFC-11	75-69-4
CFC-12	75-71-8
CHLOROBENZENE	108-90-7
CHLOROETHANE	75-00-3
CHLOROFORM	67-66-3
CHLOROMETHANE	74-87-3
1,1-DICHLOROETHANE	75-34-3
1,2-DICHLOROETHANE	107-06-2
DICHLOROMETHANE	75-09-2
1,2-DICHLOROPROPANE	78-87-5
DIMETHYL SULPHIDE	75-18-3
ETHYLBENZENE	100-41-4
ETHYLENE	74-85-1
HCFC-22	75-45-6
N-HEXANE	110-54-3
HYDROCHLORIC ACID	7647-01-0
HYDROGEN FLUORIDE	7664-39-3
HYDROGEN SULPHIDE	2148875
MERCAPTANS (AS METHYL MERCAPTAN) - TOTAL	74-93-1
MERCURY	NA - 10
METHANE	74-82-8
METHYL ETHYL KETONE	78-93-3
METHYL ISOBUTYL KETONE	108-10-1
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
PM - PARTICULATE MATTER	N/A - M08
PM10 - PARTICULATE MATTER <=10MICRONS	N/A - M09

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

All Other Waste Management Services (NAICS Code: 562990)

Contaminant	CAS
PM2.5 - PARTICULATE MATTER <=2.5MICRONS	N/A - M10
POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)	N/A - M11
PROPYLENE	115-07-1
2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	51207-31-9
1,1,2,2-TETRACHLOROETHANE	79-34-5
TETRACHLOROETHYLENE	127-18-4
TOLUENE	108-88-3
TOTAL REDUCED SULPHUR (TRS)	N/A - M14
1,2,4-TRICHLOROBENZENE	120-82-1
1,1,1-TRICHLOROETHANE	71-55-6
1,1,2-TRICHLOROETHANE	79-00-5
TRICHLOROETHYLENE	79-01-6
VINYL CHLORIDE	75-01-4
VINYLIDENE CHLORIDE	75-35-4
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Community Colleges and C.E.G.E.P.s (NAICS Code: 611210)

Contaminant	CAS
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
SULPHUR DIOXIDE	7446-09-5

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Universities (NAICS Code: 611310)

Contaminant	CAS
OXIDES OF NITROGEN (EXPRESSED AS NO)	10102-43-9
SULPHUR DIOXIDE	7446-09-5

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

General (except Paediatric) Hospitals (NAICS Code: 622111)	
Contaminant	**CAS**
CFC-11	75-69-4
ETHYLENE OXIDE	75-21-8
FORMALDEHYDE	50-00-0
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Paediatric Hospitals (NAICS Code: 622112)

Contaminant	CAS
CFC-11	75-69-4
ETHYLENE OXIDE	75-21-8
FORMALDEHYDE	50-00-0
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Psychiatric and Substance Abuse Hospitals (NAICS Code: 622210)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Specialty (except Psychiatric and Substance Abuse) Hospitals (NAICS Code: 622310)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Automotive Body, Paint and Interior Repair and Maintenance (NAICS Code: 811121)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Dry Cleaning and Laundry Services (except Coin-Operated) (NAICS Code: 812320)

Contaminant	CAS
CHLOROBENZENE	108-90-7
CUMENE	98-82-8
ETHYLBENZENE	100-41-4
ETHYLENE OXIDE	75-21-8
MINERAL SPIRITS GROUP #1	N/A - M06
NAPHTHALENE	91-20-3
TETRACHLOROETHYLENE	127-18-4
TOLUENE	108-88-3
1,1,1-TRICHLOROETHANE	71-55-6
VOLATILE ORGANIC COMPOUNDS (VOC)	N/A - M16
XYLENE	1330-20-7
O-XYLENE	95-47-6

REPORTABLE CONTAMINANTS BY INDUSTRIAL SECTOR

(These information are extracted from USEPA FIRE 6.22 emission factors and SPECIATE database. It is not intended to be a complete list of contaminants reportable by a specific sector. Methods of emission estimation, such as mass balance; stack testing data; engineering process emission calculation can also be used by reporting facilities to determine the air contaminants. This list may be updated from time to time when new information are available.)

Photo Finishing Laboratories (except One-Hour)

(NAICS Code: 812921)

Contaminant	CAS
REFER TO OTHER APPLICABLE SECTIONS, SUCH AS COMBUSTION, DEGREASING/CLEANING, ETC.	

Appendix E

Reference Tables for Reporting and Record Keeping

(For Information Only)

REFERENCE TABLES FOR REPORTING AND RECORD KEEPING

1. CDEV: CONTROL DEVICES
2. CONTAM: CONTAMINANT LIST
3. DUEQT: DISCHARGE UNIT TYPE
4. ENERGY: ENERGY TYPE
5. FUEL: FUEL TYPE
6. FUGTYPE: FUGITIVE EMISSION TYPE
7. METHOD: EMISSION ESTIMATION METHOD CODE
8. NAICS: NORTH AMERICA INDUSTRIAL CLASSIFICATION SYSTEM CODE
9. REPT: REPORTING PERIOD
10. RMODE: RELEASE MODE
11. ROADTYPE: ROAD TYPE
12. SCC: SOURCE CLASSIFICATION CODE
13. TANK: STORAGE TANK TYPE
14. UNIT: ENGINEERING UNITS

REFERENCE TABLE: CDEV
(CONTROL DEVICES)

PARAMETERS: [CDEV_CODE:A3, CDEV_DESC:A60]

CODE [CDEV_CODE] [A3]	CONTROL DEVICE DESCRIPTION [CDEV_DESC] [A60]
000	UNCONTROLLED
001	WET SCRUBBER - HIGH EFFICIENCY
002	WET SCRUBBER - MEDIUM EFFICIENCY
003	WET SCRUBBER - LOW EFFICIENCY
004	GRAVITY COLLECTOR - HIGH EFFICIENCY
005	GRAVITY COLLECTOR - MEDIUM EFFICIENCY
006	GRAVITY COLLECTOR - LOW EFFICIENCY
007	CENTRIFUGAL COLLECTOR (CYCLONE) - HIGH EFFICIENCY
008	CENTRIFUGAL COLLECTOR (CYCLONE) - MEDIUM EFFICIENCY
009	CENTRIFUGAL COLLECTOR (CYCLONE) - LOW EFFICIENCY
010	ELECTROSTATIC PRECIPITATOR - HIGH EFFICIENCY
011	ELECTROSTATIC PRECIPITATOR - MEDIUM EFFICIENCY
012	ELECTROSTATIC PRECIPITATOR - LOW EFFICIENCY
014	MIST ELIMINATOR - HIGH VELOCITY, I.E. V>250 FT/MIN
015	MIST ELIMINATOR - LOW VELOCITY, I.E. V<250 FT/MIN
016	FABRIC FILTER - HIGH TEMPERATURE, I.E. T>250F
017	FABRIC FILTER - MEDIUM TEMPERATURE, I.E. 180F<T<250F
018	FABRIC FILTER - LOW TEMPERATURE, I.E. T<180F
021	DIRECT FLAME AFTERBURNER
028	STEAM OR WATER INJECTION
046	PROCESS CHANGE
049	LIQUID FILTRATION SYSTEM
050	PACKED-GAS ABSORPTION COLUMN
051	TRAY-TYPE GAS ABSORPTION COLUMN
052	SPRAY TOWER
053	VENTURI SCRUBBER
054	PROCESS ENCLOSED
055	IMPINGEMENT PLATE SCRUBBER
056	DYNAMIC SEPARATOR (DRY)
057	DYNAMIC SEPARATOR (WET)
058	MAT OR PANEL FILTER
059	METAL FABRIC FILTER SCREEN (COTTON GINS)
061	DUST SUPPRESSION BY WATER SPRAYS

CODE [CDEV_CODE] [A3]	CONTROL DEVICE DESCRIPTION [CDEV_DESC] [A60]
062	DUST SUPPRESSION BY CHEMICAL STABILIZERS OR WETTING AGE
063	GRAVEL BED FILTER
064	ANNULAR RING FILTER
071	FLUID BED DRY SCRUBBER
075	SINGLE CYCLONE
076	MULTIPLE CYCLONE W/O FLY ASH REINJECTION
077	MULTIPLE CYCLONE W/ FLY ASH REINJECTION
079	DRY ELECTROSTATIC GRANULAR FILTER (DEGF)
085	WET CYCLONIC SEPARATOR
086	WATER CURTAIN
099	MISCELLANEOUS CONTROL DEVICES
100	BAGHOUSE
101	HIGH-EFFICIENCY PARTICULATE AIR FILTER (HEPA)
113	ROTOCLONE
117	PACKED SCRUBBER
119	DRY SCRUBBER
121	MULTIPLE CYCLONES
127	FABRIC FILTER
128	ELECTROSTATIC PRECIPITATOR
129	SCRUBBER
131	THERMAL OXIDIZER
133	INCINERATOR
134	DEMISTER
141	WET SCRUBBER
143	WET SUPPRESSION
146	WET ELECTROSTATIC PRECIPITATOR
147	INCREASED AIR/FUEL RATIO WITH INTERCOOLING
151	FIBER MIST ELIMINATOR
157	SCREEN
159	ELECTRIFIED FILTER BED

REFERENCE TABLE: CONTAM
(CONTAMINANT LIST)

PARAMETERS: [CAS_NUMBER:A11, NAME:A85, THRESHOLD:N16.4, REFERENCE:A15]

[CAS_NUMBER] [A11]	[NAME] [A85]	[THRESHOLD] [N16.4]	[REFERENCE] [A15]
83-32-9	ACENAPHTHENE	5.0000	MOE MPO
208-96-8	ACENAPHTHYLENE	5.0000	MOE MPO
75-07-0	ACETALDEHYDE	10000.0000	NPRI MPO
64-19-7	ACETIC ACID	3000.0000	MOE MPO
67-64-1	ACETONE	3000.0000	MOE MPO
75-05-8	ACETONITRILE	10000.0000	NPRI MPO
98-86-2	ACETOPHENONE	10000.0000	NPRI MPO
74-86-2	ACETYLENE	3000.0000	MOE MPO
107-02-8	ACROLEIN	10000.0000	NPRI MPO
79-06-1	ACRYLAMIDE	10000.0000	NPRI MPO
79-10-7	ACRYLIC ACID	10000.0000	NPRI MPO
107-13-1	ACRYLONITRILE	10000.0000	NPRI MPO
68920-70-7	ALKANES, C6-18, CHLORO	10000.0000	NPRI MPO
85535-84-8	ALKANES, C10-13, CHLORO	10000.0000	NPRI MPO
107-18-6	ALLYL ALCOHOL	10000.0000	NPRI MPO
107-05-1	ALLYL CHLORIDE	10000.0000	NPRI MPO
7429-90-5	ALUMINUM	10000.0000	NPRI MPO
1344-28-1	ALUMINUM OXIDE	10000.0000	NPRI MPO
NA - 16	AMMONIA (TOTAL)	10000.0000	NPRI MPO
62-53-3	ANILINE	10000.0000	NPRI MPO
120-12-7	ANTHRACENE	10000.0000	NPRI MPO
NA - 01	ANTIMONY	10000.0000	NPRI MPO
NA - 02	ARSENIC	10000.0000	NPRI MPO
7784-42-1	ARSINE	500.0000	MOE MPO
1332-21-4	ASBESTOS	10000.0000	NPRI MPO
56-55-3	BENZ(A)ANTHRACENE	50.0000	NPRI ATH REL
71-43-2	BENZENE	10000.0000	NPRI MPO
92-87-5	BENZIDINE	500.0000	MOE MPO
218-01-9	BENZO(A)PHENANTHRENE (CHRYSENE)	50.0000	NPRI ATH REL
50-32-8	BENZO(A)PYRENE	50.0000	NPRI ATH REL
205-99-2	BENZO(B)FLUORANTHENE	50.0000	NPRI ATH REL
192-97-2	BENZO(E)PYRENE	50.0000	NPRI ATH REL
191-24-2	BENZO(G,H,I)PERYLENE	50.0000	NPRI ATH REL
205-82-3	BENZO(J)FLUORANTHENE	50.0000	NPRI ATH REL
207-08-9	BENZO(K)FLUORANTHENE	50.0000	NPRI ATH REL
98-88-4	BENZOYL CHLORIDE	10000.0000	NPRI MPO
94-36-0	BENZOYL PEROXIDE	10000.0000	NPRI MPO
100-44-7	BENZYL CHLORIDE	10000.0000	NPRI MPO
7440-41-7	BERYLLIUM	500.0000	MOE MPO
92-52-4	BIPHENYL	10000.0000	NPRI MPO
111-44-4	BIS(2-CHLOROETHYL) ETHER	500.0000	MOE MPO
103-23-1	BIS(2-ETHYLHEXYL) ADIPATE	10000.0000	NPRI MPO
117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	10000.0000	NPRI MPO
542-88-1	BIS(CHLOROMETHYL) ETHER	500.0000	MOE MPO
7440-42-8	BORON	3000.0000	MOE MPO
10294-33-4	BORON TRIBROMIDE	3000.0000	MOE MPO
10294-34-5	BORON TRICHLORIDE	3000.0000	MOE MPO
7637-07-2	BORON TRIFLUORIDE	10000.0000	NPRI MPO
7726-95-6	BROMINE	10000.0000	NPRI MPO
107-04-0	1-BROMO-2-CHLOROETHANE	10000.0000	NPRI MPO
74-83-9	BROMOMETHANE	10000.0000	NPRI MPO
106-99-0	1,3-BUTADIENE	10000.0000	NPRI MPO
111-76-2	2-BUTOXYETHANOL	10000.0000	NPRI MPO

[CAS_NUMBER] [A11]	[NAME] [A85]	[THRESHOLD] [N16.4]	[REFERENCE] [A15]
141-32-2	BUTYL ACRYLATE	10000.0000	NPRI MPO
78-83-1	I-BUTYL ALCOHOL	10000.0000	NPRI MPO
71-36-3	N-BUTYL ALCOHOL	10000.0000	NPRI MPO
78-92-2	SEC-BUTYL ALCOHOL	10000.0000	NPRI MPO
75-65-0	TERT-BUTYL ALCOHOL	10000.0000	NPRI MPO
85-68-7	BUTYL BENZYL PHTHALATE	10000.0000	NPRI MPO
106-88-7	1,2-BUTYLENE OXIDE	10000.0000	NPRI MPO
123-72-8	BUTYRALDEHYDE	10000.0000	NPRI MPO
4680-78-8	C.I. ACID GREEN 3	10000.0000	NPRI MPO
569-64-2	C.I. BASIC GREEN 4	10000.0000	NPRI MPO
989-38-8	C.I. BASIC RED 1	10000.0000	NPRI MPO
28407-37-6	C.I. DIRECT BLUE 218	10000.0000	NPRI MPO
2832-40-8	C.I. DISPERSE YELLOW 3	10000.0000	NPRI MPO
81-88-9	C.I. FOOD RED 15	10000.0000	NPRI MPO
3118-97-6	C.I. SOLVENT ORANGE 7	10000.0000	NPRI MPO
842-07-9	C.I. SOLVENT YELLOW 14	10000.0000	NPRI MPO
NA - 03	CADMIUM	10000.0000	NPRI MPO
156-62-7	CALCIUM CYANAMIDE	10000.0000	NPRI MPO
7789-75-5	CALCIUM FLUORIDE	10000.0000	NPRI MPO
1305-62-0	CALCIUM HYDROXIDE	3000.0000	MOE MPO
1305-78-8	CALCIUM OXIDE	3000.0000	MOE MPO
1333-86-4	CARBON BLACK	500.0000	MOE MPO
124-38-9	CARBON DIOXIDE	100000000.0000	MOE REL
75-15-0	CARBON DISULPHIDE	10000.0000	NPRI MPO
630-08-0	CARBON MONOXIDE	20000.0000	MOE REL
56-23-5	CARBON TETRACHLORIDE	10000.0000	NPRI MPO
120-80-9	CATECHOL	10000.0000	NPRI MPO
75-69-4	CFC-11	10000.0000	NPRI MPO
75-71-8	CFC-12	10000.0000	NPRI MPO
75-72-9	CFC-13	10000.0000	NPRI MPO
76-14-2	CFC-114	10000.0000	NPRI MPO
76-15-3	CFC-115	10000.0000	NPRI MPO
115-28-6	CHLORENDIC ACID	10000.0000	NPRI MPO
7782-50-5	CHLORINE	10000.0000	NPRI MPO
10049-04-4	CHLORINE DIOXIDE	10000.0000	NPRI MPO
563-47-3	3-CHLORO-2-METHYL-1-PROPENE	10000.0000	NPRI MPO
79-11-8	CHLOROACETIC ACID	10000.0000	NPRI MPO
108-90-7	CHLOROBENZENE	10000.0000	NPRI MPO
75-00-3	CHLOROETHANE	10000.0000	NPRI MPO
67-66-3	CHLOROFORM	10000.0000	NPRI MPO
74-87-3	CHLOROMETHANE	10000.0000	NPRI MPO
542-76-7	3-CHLOROPROPIONITRILE	10000.0000	NPRI MPO
NA - 04	CHROMIUM	10000.0000	NPRI MPO
18540-29-9	CHROMIUM (VI) COMPOUNDS	500.0000	MOE MPO
8007-45-2	COAL TAR PITCH VOLATILES - SOLUBLE FRACTION	500.0000	MOE MPO
NA - 05	COBALT	10000.0000	NPRI MPO
N/A - M02	COKE OVEN EMISSIONS	500.0000	MOE MPO
NA - 06	COPPER	10000.0000	NPRI MPO
1319-77-3	CRESOL	10000.0000	NPRI MPO
108-39-4	M-CRESOL	10000.0000	NPRI MPO
95-48-7	O-CRESOL	10000.0000	NPRI MPO
106-44-5	P-CRESOL	10000.0000	NPRI MPO
4170-30-3	CROTONALDEHYDE	10000.0000	NPRI MPO
98-82-8	CUMENE	10000.0000	NPRI MPO
80-15-9	CUMENE HYDROPEROXIDE	10000.0000	NPRI MPO
NA - 07	CYANIDES	10000.0000	NPRI MPO
110-82-7	CYCLOHEXANE	10000.0000	NPRI MPO
108-93-0	CYCLOHEXANOL	10000.0000	NPRI MPO

[CAS_NUMBER] [A11]	[NAME] [A85]	[THRESHOLD] [N16.4]	[REFERENCE] [A15]
17702-41-9	DECABORANE	3000.0000	MOE MPO
1163-19-5	DECABROMODIPHENYL OXIDE	10000.0000	NPRI MPO
95-80-7	2,4-DIAMINOTOLUENE	10000.0000	NPRI MPO
224-42-0	DIBENZ(A,J)ACRIDINE	50.0000	NPRI ATH REL
53-70-3	DIBENZO(A,H)ANTHRACENE	50.0000	NPRI ATH REL
189-55-9	DIBENZO(A,I)PYRENE	50.0000	NPRI ATH REL
194-59-2	7H-DIBENZO(C,G)CARBAZOLE	50.0000	NPRI ATH REL
19287-45-7	DIBORANE	500.0000	MOE MPO
106-93-4	1,2-DIBROMOETHANE	500.0000	MOE MPO
84-74-2	DIBUTYL PHTHALATE	10000.0000	NPRI MPO
128-37-0	2,6-DI-T-BUTYL-4-METHYLPHENOL	10000.0000	NPRI MPO
131-15-7	DICAPRYL PHTHALATE	3000.0000	MOE MPO
95-50-1	O-DICHLOROBENZENE	10000.0000	NPRI MPO
106-46-7	P-DICHLOROBENZENE	10000.0000	NPRI MPO
612-83-9	3,3'-DICHLOROBENZIDINE DIHYDROCHLORIDE	10000.0000	NPRI MPO
91-94-1	3,3-DICHLOROBENZIDINE	500.0000	MOE MPO
75-34-3	1,1-DICHLOROETHANE	3000.0000	MOE MPO
107-06-2	1,2-DICHLOROETHANE	10000.0000	NPRI MPO
75-09-2	DICHLOROMETHANE	10000.0000	NPRI MPO
120-83-2	2,4-DICHLOROPHENOL	10000.0000	NPRI MPO
78-87-5	1,2-DICHLOROPROPANE	10000.0000	NPRI MPO
77-73-6	DICYCLOPENTADIENE	10000.0000	NPRI MPO
111-42-2	DIETHANOLAMINE	10000.0000	NPRI MPO
84-66-2	DIETHYL PHTHALATE	10000.0000	NPRI MPO
64-67-5	DIETHYL SULPHATE	10000.0000	NPRI MPO
624-92-0	DIMETHYL DISULPHIDE	3000.0000	MOE MPO
1300-71-6	DIMETHYL PHENOL	10000.0000	NPRI MPO
131-11-3	DIMETHYL PHTHALATE	10000.0000	NPRI MPO
77-78-1	DIMETHYL SULPHATE	10000.0000	NPRI MPO
75-18-3	DIMETHYL SULPHIDE	3000.0000	MOE MPO
124-40-3	DIMETHYLAMINE	10000.0000	NPRI MPO
121-69-7	N,N-DIMETHYLANILINE	10000.0000	NPRI MPO
57-14-7	1,2-DIMETHYLHYDRAZINE	500.0000	MOE MPO
534-52-1	4,6-DINITRO-O-CRESOL	10000.0000	NPRI MPO
42397-64-8	1,6-DINITROPYRENE	500.0000	MOE MPO
42397-65-9	1,8-DINITROPYRENE	500.0000	MOE MPO
25321-14-6	DINITROTOLUENE	10000.0000	NPRI MPO
121-14-2	2,4-DINITROTOLUENE	10000.0000	NPRI MPO
606-20-2	2,6-DINITROTOLUENE	10000.0000	NPRI MPO
117-84-0	DI-N-OCTYL PHTHALATE	10000.0000	NPRI MPO
123-91-1	1,4-DIOXANE	10000.0000	NPRI MPO
122-39-4	DIPHENYLAMINE	10000.0000	NPRI MPO
106-89-8	EPICHLOROHYDRIN	10000.0000	NPRI MPO
110-80-5	2-ETHOXYETHANOL	10000.0000	NPRI MPO
111-15-9	2-ETHOXYETHYL ACETATE	10000.0000	NPRI MPO
28679-13-2	ETHOXYNONYL BENZENE	10000.0000	NPRI MPO
141-78-6	ETHYL ACETATE	3000.0000	MOE MPO
140-88-5	ETHYL ACRYLATE	10000.0000	NPRI MPO
541-41-3	ETHYL CHLOROFORMATE	10000.0000	NPRI MPO
60-29-7	ETHYL ETHER	3000.0000	MOE MPO
100-41-4	ETHYLBENZENE	10000.0000	NPRI MPO
74-85-1	ETHYLENE	10000.0000	NPRI MPO
107-21-1	ETHYLENE GLYCOL	10000.0000	NPRI MPO
75-21-8	ETHYLENE OXIDE	10000.0000	NPRI MPO
96-45-7	ETHYLENE THIOUREA	10000.0000	NPRI MPO
1309-37-1	FERRIC OXIDE	3000.0000	MOE MPO
206-44-0	FLUORANTHENE	50.0000	NPRI ATH REL
86-73-7	FLUORENE	5.0000	MOE MPO
7782-41-4	FLUORINE	10000.0000	NPRI MPO

[CAS_NUMBER] [A11]	[NAME] [A85]	[THRESHOLD] [N16.4]	[REFERENCE] [A15]
50-00-0	FORMALDEHYDE	10000.0000	NPRI MPO
64-18-6	FORMIC ACID	10000.0000	NPRI MPO
98-01-1	FURFURAL	3000.0000	MOE MPO
98-00-0	FURFURYL ALCOHOL	3000.0000	MOE MPO
N/A - M04	GLYCOL ETHERS (MISC.)	3000.0000	MOE MPO
353-59-3	HALON 1211	10000.0000	NPRI MPO
75-63-8	HALON 1301	10000.0000	NPRI MPO
75-45-6	HCFC-22	10000.0000	NPRI MPO
41834-16-6	HCFC-122 AND ALL ISOMERS	10000.0000	NPRI MPO
34077-87-7	HCFC-123 AND ALL ISOMERS	10000.0000	NPRI MPO
63938-10-3	HCFC-124 AND ALL ISOMERS	10000.0000	NPRI MPO
1717-00-6	HCFC-141B	10000.0000	NPRI MPO
75-68-3	HCFC-142B	10000.0000	NPRI MPO
76-44-8	HEPTACHLOR	500.0000	MOE MPO
142-82-5	N-HEPTANE	3000.0000	MOE MPO
87-68-3	HEXACHLORO-1,3-BUTADIENE	500.0000	MOE MPO
118-74-1	HEXACHLOROBENZENE	0.0000	NPRI ATH
319-84-6	HEXACHLOROCYCLOHEXANE	500.0000	MOE MPO
77-47-4	HEXACHLOROCYCLOPENTADIENE	10000.0000	NPRI MPO
67-72-1	HEXACHLOROETHANE	10000.0000	NPRI MPO
70-30-4	HEXACHLOROPHENE	10000.0000	NPRI MPO
822-06-0	HEXAMETHYLENE DIISOCYANATE MONOMER	500.0000	MOE MPO
110-54-3	N-HEXANE	10000.0000	NPRI MPO
811-97-2	HFC-134A	10.0000	MOE REL
302-01-2	HYDRAZINE	10000.0000	NPRI MPO
7647-01-0	HYDROCHLORIC ACID	10000.0000	NPRI MPO
74-90-8	HYDROGEN CYANIDE	10000.0000	NPRI MPO
7664-39-3	HYDROGEN FLUORIDE	10000.0000	NPRI MPO
7783-06-4	HYDROGEN SULPHIDE	10000.0000	NPRI MPO
123-31-9	HYDROQUINONE	10000.0000	NPRI MPO
193-39-5	INDENO(1,2,3-C,D)PYRENE	50.0000	NPRI ATH REL
7439-89-6	IRON	3000.0000	MOE MPO
13463-40-6	IRON PENTACARBONYL	10000.0000	NPRI MPO
78-84-2	ISOBUTYRALDEHYDE	10000.0000	NPRI MPO
4098-71-9	ISOPHORONE DIISOCYANATE	10000.0000	NPRI MPO
78-79-5	ISOPRENE	10000.0000	NPRI MPO
67-63-0	ISOPROPYL ALCOHOL	10000.0000	NPRI MPO
80-05-7	P,P'-ISOPROPYLIDENEDIPHENOL	10000.0000	NPRI MPO
120-58-1	ISOSAFROLE	10000.0000	NPRI MPO
NA - 08	LEAD	10000.0000	NPRI MPO
7439-93-2	LITHIUM - OTHER THAN HYDRIDES	3000.0000	MOE MPO
554-13-2	LITHIUM CARBONATE	10000.0000	NPRI MPO
7580-67-8	LITHIUM HYDRIDES	500.0000	MOE MPO
1309-48-4	MAGNESIUM OXIDE	3000.0000	MOE MPO
108-31-6	MALEIC ANHYDRIDE	10000.0000	NPRI MPO
NA - 09	MANGANESE	10000.0000	NPRI MPO
74-93-1	MERCAPTANS (AS METHYL MERCAPTAN) - TOTAL	500.0000	MOE MPO
149-30-4	2-MERCAPTOBENZOTHIAZOLE	10000.0000	NPRI MPO
NA - 10	MERCURY	5.0000	NPRI ATH MPO
74-82-8	METHANE	5000000.0000	MOE REL
67-56-1	METHANOL	10000.0000	NPRI MPO
109-86-4	2-METHOXYETHANOL	10000.0000	NPRI MPO
110-49-6	2-METHOXYETHYL ACETATE	10000.0000	NPRI MPO
96-33-3	METHYL ACRYLATE	10000.0000	NPRI MPO
78-93-3	METHYL ETHYL KETONE	10000.0000	NPRI MPO
74-88-4	METHYL IODIDE	10000.0000	NPRI MPO
108-10-1	METHYL ISOBUTYL KETONE	10000.0000	NPRI MPO
22967-92-6	METHYL MERCURY	5	MOE MPO
80-62-6	METHYL METHACRYLATE	10000.0000	NPRI MPO

[CAS_NUMBER] [A11]	[NAME] [A85]	[THRESHOLD] [N16.4]	[REFERENCE] [A15]
1634-04-4	METHYL TERT-BUTYL ETHER	10000.0000	NPRI MPO
872-50-4	N-METHYL-2-PYRROLIDONE	10000.0000	NPRI MPO
12108-13-3	METHYLCYCLOPENTADIENYL MANGANESE TRICARBONYL (MMT)	500.0000	MOE MPO
101-14-4	P,P'-METHYLENEBIS(2-CHLORANILINE)	10000.0000	NPRI MPO
5124-30-1	1,1-METHYLENEBIS(4-ISOCYANATOCYCLOHEXANE)	10000.0000	NPRI MPO
101-68-8	METHYLENEBIS(PHENYLISOCYANATE)	10000.0000	NPRI MPO
101-77-9	P,P'-METHYLENEDIANILINE	10000.0000	NPRI MPO
924-42-5	N-METHYLOLACRYLAMIDE	10000.0000	NPRI MPO
109-06-8	2-METHYLPYRIDINE	10000.0000	NPRI MPO
90-94-8	MICHLER'S KETONE	10000.0000	NPRI MPO
N/A - M06	MINERAL SPIRITS GROUP #1	3000.0000	MOE MPO
N/A - M17	MINERAL SPIRITS GROUP #2	3000.0000	MOE MPO
N/A - M18	MINERAL SPIRITS GROUP #3	500.0000	MOE MPO
1313-27-5	MOLYBDENUM TRIOXIDE	10000.0000	NPRI MPO
74-89-5	MONOMETHYL AMINE	500.0000	MOE MPO
91-20-3	NAPHTHALENE	10000.0000	NPRI MPO
NA - 11	NICKEL	10000.0000	NPRI MPO
13463-39-3	NICKEL CARBONYL	500.0000	MOE MPO
NA - 17	NITRATE ION	10000.0000	NPRI MPO
7697-37-2	NITRIC ACID	10000.0000	NPRI MPO
139-13-9	NITRILOTRIACETIC ACID	10000.0000	NPRI MPO
100-01-6	P-NITROANILINE	10000.0000	NPRI MPO
98-95-3	NITROBENZENE	10000.0000	NPRI MPO
55-63-0	NITROGLYCERIN	10000.0000	NPRI MPO
100-02-7	P-NITROPHENOL	10000.0000	NPRI MPO
79-46-9	2-NITROPROPANE	10000.0000	NPRI MPO
55-18-5	N-NITROSODIETHYLAMINE	500.0000	MOE MPO
62-75-9	N-NITROSODIMETHYLAMINE	500.0000	MOE MPO
86-30-6	N-NITROSODIPHENYLAMINE	10000.0000	NPRI MPO
10024-97-2	NITROUS OXIDE	2700.0000	MOE REL
104-40-5	NONYLPHENOL	10000.0000	NPRI MPO
27177-05-5	NONYLPHENOL HEPTA(OXYETHYLENE) ETHANOL	10000.0000	NPRI MPO
84852-15-3	NONYLPHENOL, INDUSTRIAL	10000.0000	NPRI MPO
27177-08-8	NONYLPHENOL NONA(OXYETHYLENE) ETHANOL	10000.0000	NPRI MPO
25154-52-3	N-NONYLPHENOL	10000.0000	NPRI MPO
9016-45-9	NONYLPHENOL POLYETHYLENE GLYCOL ETHER	10000.0000	NPRI MPO
26027-38-3	P-NONYLPHENOL POLYETHYLENE GLYCOL ETHER	10000.0000	NPRI MPO
27986-36-3	NONYLPHENOXY ETHANOL	10000.0000	NPRI MPO
104-35-8	2-(P-NONYLPHENOXY) ETHANOL	10000.0000	NPRI MPO
20427-84-3	2-(2-(P-NONYLPHENOXY)ETHOXY) ETHANOL	10000.0000	NPRI MPO
7311-27-5	2-(2-(2-(2-(P-NONYLPHENOXY)ETHOXY)ETHOXY)ETHOXY) ETHANOL	10000.0000	NPRI MPO
29082-74-4	OCTACHLOROSTYRENE	500.0000	MOE MPO
10102-43-9	OXIDES OF NITROGRN (NITROGEN OXIDES, EXPRESSED AS NO)	14000.0000	MOE REL
37251-69-7	OXIRANE, METHYL-, POLYMER WITH OXIRANE, MONO(NOYLPHENYL)ETHER	10000.0000	NPRI MPO
123-63-7	PARALDEHYDE	10000.0000	NPRI MPO
56-38-2	PARATHION	500.0000	MOE MPO
19624-22-7	PENTABORANE	500.0000	MOE MPO
76-01-7	PENTACHLOROETHANE	10000.0000	NPRI MPO
82-68-8	PENTACHLORONITROBENZENE	3000.0000	MOE MPO

[CAS_NUMBER] [A11]	[NAME] [A85]	[THRESHOLD] [N16.4]	[REFERENCE] [A15]
87-86-5	PENTACHLOROPHENOL (PCP)	500.0000	MOE MPO
79-21-0	PERACETIC ACID	10000.0000	NPRI MPO
198-55-0	PERYLENE	50.0000	NPRI ATH REL
85-01-8	PHENANTHRENE	50.0000	NPRI ATH REL
108-95-2	PHENOL	10000.0000	NPRI MPO
106-50-3	P-PHENYLENEDIAMINE	10000.0000	NPRI MPO
90-43-7	O-PHENYLPHENOL	10000.0000	NPRI MPO
75-44-5	PHOSGENE	10000.0000	NPRI MPO
7664-38-2	PHOSPHORIC ACID	10000.0000	NPRI MPO
7723-14-0	PHOSPHORUS	10000.0000	NPRI MPO
85-44-9	PHTHALIC ANHYDRIDE	10000.0000	NPRI MPO
N/A - M08	PM - PARTICULATE MATTER	20000.0000	MOE REL
N/A - M09	PM10 - PARTICULATE MATTER <=10MICRONS	500.0000	MOE REL
N/A - M10	PM2.5 - PARTICULATE MATTER <=2.5MICRONS	300.0000	MOE REL
1336-36-3	POLYCHLORINATED BIPHENYLS (PCBS)	500.0000	MOE MPO
N/A - M11	POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) AND POLYCHLORINATED DIBENZOFURANS (PCDF)		NPRI ATH
9016-87-9	POLYMERIC DIPHENYLMETHANE DIISOCYANATE	10000.0000	NPRI MPO
7758-01-2	POTASSIUM BROMATE	10000.0000	NPRI MPO
107-19-7	PROPARGYL ALCOHOL	10000.0000	NPRI MPO
123-38-6	PROPIONALDEHYDE	10000.0000	NPRI MPO
115-07-1	PROPYLENE	10000.0000	NPRI MPO
75-56-9	PROPYLENE OXIDE	10000.0000	NPRI MPO
129-00-0	PYRENE	50.0000	NPRI ATH REL
110-86-1	PYRIDINE	10000.0000	NPRI MPO
91-22-5	QUINOLINE	10000.0000	NPRI MPO
106-51-4	P-QUINONE	10000.0000	NPRI MPO
94-59-7	SAFROLE	10000.0000	NPRI MPO
NA - 12	SELENIUM	10000.0000	NPRI MPO
NA - 13	SILVER	10000.0000	NPRI MPO
7681-49-4	SODIUM FLUORIDE	10000.0000	NPRI MPO
7632-00-0	SODIUM NITRITE	10000.0000	NPRI MPO
100-42-5	STYRENE	10000.0000	NPRI MPO
96-09-3	STYRENE OXIDE	10000.0000	NPRI MPO
7446-09-5	SULPHUR DIOXIDE	20000.0000	MOE REL
2551-62-4	SULPHUR HEXAFLUORIDE	10000.0000	NPRI MPO
7664-93-9	SULPHURIC ACID	10000.0000	NPRI MPO
13494-80-9	TELLURIUM - EXCLUDING HYDROGEN TELLURIDE	500.0000	MOE MPO
140-66-9	4-TERT-OCTYLPHENOL	10000.0000	NPRI MPO
1746-01-6	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (TEQ)	0.0001	MOE MPO
51207-31-9	2,3,7,8-TETRACHLORODIBENZOFURAN (TEQ)	0.0001	MOE MPO
630-20-6	1,1,1,2-TETRACHLOROETHANE	10000.0000	NPRI MPO
79-34-5	1,1,2,2-TETRACHLOROETHANE	10000.0000	NPRI MPO
127-18-4	TETRACHLOROETHYLENE	10000.0000	NPRI MPO
64-75-5	TETRACYCLINE HYDROCHLORIDE	10000.0000	NPRI MPO
78-00-2	TETRAETHYL LEAD	10000.0000	NPRI MPO
109-99-9	TETRAHYDROFURAN	3000.0000	MOE MPO
62-56-6	THIOUREA	10000.0000	NPRI MPO
1314-20-1	THORIUM DIOXIDE	10000.0000	NPRI MPO
7440-31-5	TIN	3000.0000	MOE MPO
7440-32-6	TITANIUM	3000.0000	MOE MPO
7550-45-0	TITANIUM TETRACHLORIDE	10000.0000	NPRI MPO
108-88-3	TOLUENE	10000.0000	NPRI MPO

[CAS_NUMBER] [A11]	[NAME] [A85]	[THRESHOLD] [N16.4]	[REFERENCE] [A15]
584-84-9	TOLUENE-2,4-DIISOCYANATE	10000.0000	NPRI MPO
91-08-7	TOLUENE-2,6-DIISOCYANATE	10000.0000	NPRI MPO
26471-62-5	TOLUENEDIISOCYANATE	10000.0000	NPRI MPO
N/A - M14	TOTAL REDUCED SULPHUR (TRS)	3000.0000	MOE MPO
688-73-3	TRIBUTYLTIN	500.0000	MOE MPO
120-82-1	1,2,4-TRICHLOROBENZENE	10000.0000	NPRI MPO
71-55-6	1,1,1-TRICHLOROETHANE	3000.0000	MOE MPO
79-00-5	1,1,2-TRICHLOROETHANE	10000.0000	NPRI MPO
79-01-6	TRICHLOROETHYLENE	10000.0000	NPRI MPO
95-95-4	2,4,5-TRICHLOROPHENOL	3000.0000	MOE MPO
88-06-2	2,4,6-TRICHLOROPHENOL	500.0000	MOE MPO
96-18-4	1,2,3-TRICHLOROPROPANE	3000.0000	MOE MPO
121-44-8	TRIETHYLAMINE	10000.0000	NPRI MPO
95-63-6	1,2,4-TRIMETHYLBENZENE	10000.0000	NPRI MPO
16938-22-0	2,2,4-TRIMETHYLHEXAMETHYLENE DIISOCYANATE	10000.0000	NPRI MPO
15646-96-5	2,4,4-TRIMETHYLHEXAMETHYLENE DIISOCYANATE	10000.0000	NPRI MPO
7440-62-2	VANADIUM	10000.0000	NPRI MPO
108-05-4	VINYL ACETATE	10000.0000	NPRI MPO
593-60-2	VINYL BROMIDE	3000.0000	MOE MPO
75-01-4	VINYL CHLORIDE	10000.0000	NPRI MPO
75-02-5	VINYL FLOURIDE	3000.0000	MOE MPO
75-35-4	VINYLIDENE CHLORIDE	10000.0000	NPRI MPO
N/A - M16	VOLATILE ORGANIC COMPOUNDS (VOC)	10000.0000	MOE REL
1330-20-7	XYLENE	10000.0000	NPRI MPO
108-38-3	M-XYLENE	10000.0000	MOE MPO
95-47-6	O-XYLENE	10000.0000	MOE MPO
106-42-3	P-XYLENE	10000.0000	MOE MPO
NA - 14	ZINC	10000.0000	NPRI MPO

REFERENCE TABLE: DUEQT
(DISCHARGE UNIT TYPE)

PARAMETERS: [EQT_CODE:A3, EQT_DESC:A30]

CODE [EQT_CODE] [A3]	DISCHARGE UNIT TYPE DESCRIPTION [EQT_DESC] [A30]
AF	ARCH FIRED BOILER
C	CYCLONE BOILER
CB	CELL BURNER WALL-FIRED BOILER
CC	COMBINED CYCLE BOILER
CFB	CIRCULATING FLUIDIZED BED BOILER
DB	DRY BOTTOM WALL-FIRED BOILER
DTF	DRY BOTTOM TURBO-FIRED BOILER
DVF	DRY BOTTOM VERTICAL-FIRED BOILER
S	STOKER BOILER
T	TANGENTIAL FIRED BOILER
WBF	WET BOTTOM WALL-FIRED BOILER
WBT	WET BOTTOM TURBO-FIRED BOILER
WVF	WET BOTTOM VERTICAL-FIRED BOILER
OB	OTHER BOILER
CT	COMBUSTION TURBINE
RE	RECIPROCATING ENGINES
EAF	ELECTRIC ARC FURNACE
BLF	BLAST FURNACE
BOF	BASIC OXYGEN FURNACE
DUO	DUTCH OVEN
FUR	FURNACE
OTH	OTHER

REFERENCE TABLE: ENERGY
(ENERGY TYPE)

PARAMETERS:[ENGY_CODE:A4, ENGY_TYPE:A30]

CODE [ENGY_CODE] [A4]	ENERGY TYPE DESCRIPTION [ENGY_TYPE] [A30]
FOSF	FOSSIL FUEL
HYDE	HYDRO-ELECTRIC
GEO	GEOTHERMAL
NUCL	NUCLEAR
SOLR	SOLAR
WIND	WIND

REFERENCE TABLE: FUEL
(FUEL TYPE)

PARAMETERS:[FUEL_CODE:A4, FUEL_TYPE:A30]

CODE [FUEL_CODE] [A4]	FUEL TYPE DESCRIPTION [FUEL_TYPE] [A30]
ANT	ANTHRACITE COAL
BAG	BAGASSE
BARK	BARK
BFG	BLAST FURNACE GAS
BIO	BIOMASS
BIT	BITUMINOUS COAL
LPGB	BUTANE
COG	COKE OVEN GAS
COKE	COKE
COM	COAL-OIL MIXTURE
DSL	DIESEL
ELEC	ELECTRICITY
FO-1	FUEL OIL #1
FO-2	DISTILLATE OIL
FO-4	FUEL OIL #4
FO-5	FUEL OIL #5
FO-6	RESIDUAL OIL
GASL	GASOLINE
GEO	GEOTHERMAL
HOR	HEAT OF REACTION
HYDR	HYDRO POWER
JF	JET FUEL (OIL)
KER	KEROSENE
LIG	LIGNITE COAL
LPG	LIQUID PETROLEUM GAS
LWAS	LIQUID WASTE
MF	MULTI FUEL
MTE	METHANE GAS
NG	NATURAL GAS
NUCL	NUCLEAR
OTH	OTHER ENERGY SOURCE
PRG	PROCESS GAS
LPGP	PROPANE
RFG	REFINERY GAS
STM	STEAM
SNG	SYNTHETIC NATURAL GAS
SOLR	SOLAR
SUBB	SUB-BITUMINOUS COAL
SWAS	SOLID WASTE
WIND	WIND
WOOD	WOOD

REFERENCE TABLE: FUGTYPE
(FUGITIVE EMISSION TYPE)

PARAMETERS: [FUG_CODE:A4, FUG_DESC:A40]

CODE [FUG_CODE] [A4]	FUGITIVE EMISSION TYPE DESCRIPTION [FUG_DESC] [A40]
PAV	PAVED ROADS
UNPA	UNPAVED ROADS
CONS	HEAVY CONSTRUCTIONS
AGGH	AGGREGATE HANDLING
PILE	STORAGE PILES
TKWL	STORAGE TANKS - WORKING LOSS
TKSL	STORAGE TANKS - STANDING LOSS
FLAR	INDUSTRIAL FLARES
WIND	INDUSTRIAL WIND EROSION
EXPL	EXPLOSIVE DETONATION
COOL	WET COOLING TOWERS
SOIL	SOIL EVAPORATION

REFERENCE TABLE: METHOD
(EMISSION ESTIMATION METHOD CODE)

PARAMETERS: [METH_CODE:A10, METH_DESC:A70]

CODE [METH_CODE] [A10]	EMISSION ESTIMATION METHOD CODE DESCRIPTION [METH_DESC] [A70]
CEM	CONTINUOUS EMISSION MONITORING
PEM	PREDICTIVE EMISSION MONITORING
SSAM	SOURCE SPECIFIC/STACK SAMPLING
MASS	MASS BALANCE
EPAEFA	USEPA EMISSION FACTORS WITH QUALITY RATING A
EPAEFB	USEPA EMISSION FACTORS WITH QUALITY RATING B
EPAEFC	USEPA EMISSION FACTORS WITH QUALITY RATING C
EPAEFD	USEPA EMISSION FACTORS WITH QUALITY RATING D
EPAEFE	USEPA EMISSION FACTORS WITH QUALITY RATING E
EPAEF	USEPA EMISSION FACTORS WITH UNKNOWN QUALITY RATING
SECEF	INDUSTRIAL/SECTORIAL EMISSION FACTORS
OTHEF	OTHER EMISSION FACTORS, SPECIFY
SWFUG	EMISSION ESTIMATION SOFTWARE, FUGITIVE DUST
SWLAND	EMISSION ESTIMATION SOFTWARE, LANDFILL
SWBEIS	EMISSION ESTIMATION SOFTWARE, BIOGENIC EMISSIONS INVENTORY SYSTEM
SWPM	EMISSION ESTIMATION SOFTWARE, PM CALCULATOR
SWSPEC	EMISSION ESTIMATION SOFTWARE, SPECIATE
SWTANK	EMISSION ESTIMATION SOFTWARE, TANKS
SWWATER	EMISSION ESTIMATION SOFTWARE, WATER9
SWOTH	EMISSION ESTIMATION SOFTWARE, OTHERS, SPECIFY
ENGCAL	ENGINEERING CALCULATION, SPECIFY
OTHER	OTHER APPROVED METHODS

REFERENCE TABLE: NAICS
(NORTH AMERICA INDUSTRIAL CLASSIFICATION SYSTEM CODE)

North American Industry Classification System (NAICS) codes are available at http://www.statcan.ca/english/Subjects/Standard/tabcon.htm

PARAMETERS:

[NAICS_CODE:A6]	The owner and operator of a facility are required to select the appropriate six-digit NAICS code.

REFERENCE TABLE: REPT
(REPORTING PERIOD)

PARAMETERS: [REPT_CODE:A4, REPT_DESC:A40]

CODE [REPT_CODE] [A4]	REPORTING PERIOD DESCRIPTION [REPT_DESC] [A40]
ANN	ANNUAL (JANUARY TO DECEMBER)
QTR1	QUARTER 1 (JANUARY TO MARCH)
QTR2	QUARTER 2 (APRIL TO JUNE)
QTR3	QUARTER 3 (JULY TO SEPTEMBER)
QTR4	QUARTER 4 (OCTOBER TO DECEMBER)
SMOG1	SMOG SEASON (MAY AND JUNE)
SMOG2	SMOG SEASON (JULY TO SEPTEMBER)
SMOG	SMOG SEASON (MAY TO SEPTEMBER)
JAN	MONTH OF JANUARY
FEB	MONTH OF FEBRUARY
MAR	MONTH OF MARCH
APR	MONTH OF APRIL
MAY	MONTH OF MAY
JUN	MONTH OF JUNE
JUL	MONTH OF JULY
AUG	MONTH OF AUGUST
SEP	MONTH OF SEPTEMBER
OCT	MONTH OF OCTOBER
NOV	MONTH OF NOVEMBER
DEC	MONTH OF DECEMBER

REFERENCE TABLE: RMODE
(RELEASE MODE)

PARAMETERS: [RMODE_CODE:A4, RMODE_DESC:A10]

CODE [RMODE_CODE] [A4]	RELEASE MODE DESCRIPTION [RMODE_DESC] [A10]
STK	STACK
STOR	STORAGE
FUG	FUGITIVE
SPILL	SPILL
OTH	OTHER

REFERENCE TABLE: ROADTYPE
(ROAD TYPE)

PARAMETERS: [ROAD_CODE:A3, ROAD_TYPE:A60, SILTC_PC:N8.3, SILTL_GPM2:N8.3]

CODE [ROAD_CODE] [A3]	ROAD TYPE DESCRIPTION [ROAD_TYPE] [A60]	SILT CONTENT, PERCENT [SILTC_PC] [N8.3]	SILT LOADING, g/m^2 [SILTL_GPM2] [N8.3]
P01	ASPHALT BATCHING: PAVED ROAD		120
P02	CONCRETE BATCHING: PAVED ROAD		12.000
P03	COPPER SMELTING: PAVED ROAD		292.000
P04	IRON AND STEEL PRODUCTION: PAVED ROAD		9.700
P05	LIMITED ACCESS PAVED ROAD		0.015
P06	MUNICIPAL SOLID WASTE LANDFILL: PAVED ROAD		7.400
P07	PUBLIC PAVED ROAD: HIGH TRAFFIC		0.100
P08	PUBLIC PAVED ROAD: HIGH TRAFFIC, WORST CONDITION		0.500
P09	PUBLIC PAVED ROAD: LOW TRAFFIC		0.400
P10	PUBLIC PAVED ROAD: LOW TRAFFIC, WORST CONDITION		3.000
P11	QUARRY: PAVED ROAD		8.200
P12	SAND AND GRAVEL: PAVED ROAD		70.000
U01	CONSTRUCTION SITES: UNPAVED SCRAPER ROUTE	8.500	
U02	COPPER SMELTING: UNPAVED PLANT ROAD	17.000	
U03	IRON AND STEEL PRODUCTION: UNPAVED PLANT ROAD	6.000	
U04	LUMBER SAWMILLS: LOG YARD	8.400	
U05	MUNICIPAL SOLID WASTE LANDFILL: DISPOSAL ROTUE	6.400	
U06	PUBLICLY ACCESSIBLE ROAD: DIRT	11.000	
U07	PUBLICLY ACCESSIBLE ROAD: GRAVEL/CRUSHED LIMESTONE	6.400	
U08	SAND AND GRAVEL PROCESSING: UNPAVED PLANT ROAD	4.800	
U09	STONE QUARRYING AND PROCESSING: UNPAVED HAUL ROAD TO/FROM PIT	8.300	
U10	STONE QUARRYING AND PROCESSING: UNPAVED PLANT ROAD	10.000	
U11	TACONITE MINING AND PROCESSING: UNPAVED HAUL ROAD TO/FROM PIT	5.800	
U12	TACONITE MINING AND PROCESSING: UNPAVED SERVICE ROAD	4.300	
U13	WESTERN SURFACE COAL MINING: UNPAVED HAUL TO/FROM ROAD	8.400	
U14	WESTERN SURFACE COAL MINING: UNPAVED PLANT ROAD	5.100	

CODE [ROAD_CODE] [A3]	ROAD TYPE DESCRIPTION [ROAD_TYPE] [A60]	SILT CONTENT, PERCENT [SILTC_PC] [N8.3]	SILT LOADING, g/m^2 [SILTL_GPM2] [N8.3]
U15	WESTERN SURFACE COAL MINING: UNPAVED SCRAPER ROUTE	17.000	

REFERENCE TABLE: SCC
(SOURCE CLASSIFICATION CODE)

Source Classification Code (SCC) is available at
http://www.epa.gov/ttn/chief/codes/index.html

PARAMETERS:

[SCC_CODE:A11]	The owner and operator of a facility are required to select the appropriate SCC code.

REFERENCE TABLE: TANK
(STORAGE TANK TYPE)

PARAMETERS: [TANK_CODE:A4, TANK_DESC:A30]

CODE [TANK_CODE] [A4]	STORAGE TANK TYPE DESCRIPTION [TANK_DESC] [A40]
DEFR	Domed External Floating Roof Tanks
EFR	External Floating Roof Tank
FR	Fixed Roof Tank
IFR	Internal Floating Roof Tank
PRES	Pressure Tanks
UDG	Underground Storage Tank
VVS	Variable Vapor Space Tanks

REFERENCE TABLE: UNIT (ENGINEERING UNITS)

PARAMETERS: [UNIT_CODE:A20, UNIT_NAME:A40, UNIT_TYPE:A20]

CODE [UNIT_CODE] [A20]	UNIT DESCRIPTION [UNIT_NAME] [A40]	UNIT TYPE [UNIT_TYPE] [A20]
ALUMUMIN	ALUMUMIN	COUNT
APPLIANCES	APPLIANCES	COUNT
AUTOMOBILES	AUTOMOBILES	COUNT
BALES	BALES OF COTTON	COUNT
BATTERIES	BATTERIES	COUNT
BEDS	BEDS	COUNT
BLASTS	BLASTS	COUNT
BOATS	BOATS	COUNT
CALLS	CALLS	COUNT
CATTLE	CATTLE	COUNT
CHICKENS	CHICKENS	COUNT
CIGARETTES	CIGARETTES	COUNT
COATING LINES	COATING LINES	COUNT
COLD CLEANERS	COLD CLEANERS	COUNT
CONNECTIONS	CONNECTIONS	COUNT
CONTAINERS	CONTAINERS	COUNT
DEGREASING UNITS	DEGREASING UNITS	COUNT
DRAINS	DRAINS	COUNT
DRUMS	DRUMS	COUNT
E3 BATTERIES	1,000 BATTERIES	COUNT
E3 BIRDS	1,000 BIRDS	COUNT
E3 CONTAINERS	1,000 CONTAINERS	COUNT
E3 OUTBOARDS	1,000 OUTBOARDS	COUNT
E3 PARTS	1,000 PARTS	COUNT
E3 PERSON	1,000 PERSONS	COUNT
E3 PIECES	1,000 PIECES	COUNT
E3 PROCESS UNITS	1,000 PROCESS UNITS	COUNT
E3 TIRES	1,000 TIRES	COUNT
E3 UNITS	1,000 UNITS	COUNT
E6 CIGARETTES	1,000,000 CIGARETTES	COUNT
E6 PIECES	1,000,000 PIECES	COUNT
EACH	EACH	COUNT
FLANGES	FLANGES	COUNT
HEADS	HEADS	COUNT
HOLES	HOLES	COUNT
ITEMS	ITEMS	COUNT
LAWNMOWERS	LAWNMOWERS	COUNT
LTO	LANDING-TAKEOFF CYCLE	COUNT
MOTORCYCLES	MOTORCYCLES	COUNT
MOVEMENTS	MOVEMENTS	COUNT
PARTS	PARTS	COUNT

CODE [UNIT_CODE] [A20]	UNIT DESCRIPTION [UNIT_NAME] [A40]	UNIT TYPE [UNIT_TYPE] [A20]
PERSON	PERSONS	COUNT
PIECES	PIECES	COUNT
PRINTING LINES	PRINTING LINES	COUNT
PROCESS UNITS	PROCESS UNITS	COUNT
SEALS	SEALS	COUNT
SLIPS	SLIPS	COUNT
SNOWMOBILES	SNOWMOBILES	COUNT
SOLVENT CLEANERS	SOLVENT CLEANERS	COUNT
STRUCTURES	STRUCTURES	COUNT
TANK CARS	TANK CARS	COUNT
TANK TRUCKS	TANK TRUCKS	COUNT
TIRES	TIRES	COUNT
TRUCKS	TRUCKS	COUNT
UNITS	UNITS	COUNT
VALVES	VALVES	COUNT
VEHICLES	VEHICLES	COUNT
WELLS	WELLS	COUNT
FIBRES/CM3	FIBRES PER CUBIC CENTIMETRE	COUNT/LENGTH^3
FIBRES/M3	FIBRES PER CUBIC METRE	COUNT/LENGTH^3
$	DOLLARS	CURRENCY
E3 $	THOUSAND DOLLARS	CURRENCY
E6 $	MILLION DOLLARS	CURRENCY
BTU	BRTISH THERMAL UNITS	ENERGY
E5 BHP-H	100,000 BRAKE HORSEPOWER-HOURS	ENERGY
E9 J	1,000,000,000 JOULES	ENERGY
BRAKE GW-HR	BRAKE GIGAWATT HOUR	ENERGY
GW-HR	GIGAWATT HOUR	ENERGY
HP-HR	HORSEPOWER HOURS	ENERGY
J	JOULES	ENERGY
KCAL	KILOCALORIES	ENERGY
KJ	KILOJOULES	ENERGY
KW-HR	KILOWATT HOUR	ENERGY
MJ	MEGAJOULES	ENERGY
MMBTU	MILLION BRTISH THERMAL UNITS	ENERGY
MW-HR	MEGAWATT HOUR	ENERGY
W-HR	WATT HOUR	ENERGY
KJ/L	KILOJOULES PER LITRE	ENERGY/LENGTH^3
MJ/L	MEGAJOULES PER LITRE	ENERGY/LENGTH^3
MJ/TONNE	MEGAJOULES PER TONNE	ENERGY/MASS
BTU/HR	BRITISH THERMAL UNITS PER HOUR	ENERGY/TIME
KW	KILOWATTS	ENERGY/TIME
MMBTU/HR	MILLION BRITISH THERMAL UNITS PER HOUR	ENERGY/TIME
MW	MEGAWATTS	ENERGY/TIME
W	WATTS	ENERGY/TIME
E3 MILE	1,000 MILES	LENGTH
E3 VKMT	1,000 VEHICLE KILOMETRES TRAVELLED	LENGTH

CODE [UNIT_CODE] [A20]	UNIT DESCRIPTION [UNIT_NAME] [A40]	UNIT TYPE [UNIT_TYPE] [A20]
E4 VKMT	10,000 VEHICLE KILOMETRES TRAVELLED	LENGTH
E6 M	1,000,000 METRES	LENGTH
E6 VKMT	1,000,000 VEHICLE KILOMETRES TRAVELLED	LENGTH
E9 M	1,000,000,000 METRES	LENGTH
FT	FEET	LENGTH
KM	KILOMETRES	LENGTH
M	METRES	LENGTH
MILE	MILES	LENGTH
VKMT	VEHICLE KILOMETRES TRAVELLED	LENGTH
KM/HR	KILOMETRES PER HOUR	LENGTH/TIME
M/DAY	METRES PER DAY	LENGTH/TIME
M/MIN	METRES PER MINUTE	LENGTH/TIME
M/S	METRES PER SECOND	LENGTH/TIME
MPH	MILES PER HOUR	LENGTH/TIME
ACRE	ACRES	LENGTH^2
E3 ACRE	1,000 ACRES	LENGTH^2
E3 M2	1,000 SQUARE METRES	LENGTH^2
E4 M2 (9.5MM)	10,000 SQUARE METRES (9.5MM)	LENGTH^2
E6 M2	1,000,000 SQUARE METRES	LENGTH^2
FT2	SQUARE FEET	LENGTH^2
HECTR	HECTARES	LENGTH^2
M2	SQUARE METRES	LENGTH^2
M2 (19MM)	SQUARE METRES (19MM)	LENGTH^2
M2 (9.5MM)	SQUARE METRES (9.5MM)	LENGTH^2
BBL	BARRELS	LENGTH^3
BBL50GAL	50 GALLON BARRELS	LENGTH^3
CC	CUBIC CENTIMETRES	LENGTH^3
E2 M3	100 CUBIC METRES	LENGTH^3
E3 GAL	1,000 GALLON (U.S.)	LENGTH^3
E3 L	1,000 LITRES	LENGTH^3
E3 M3	1,000 CUBIC METRES	LENGTH^3
E6 L	1,000,000 LITRES	LENGTH^3
E6 M3	1,000,000 CUBIC METRES	LENGTH^3
FT3	CUBIC FEET	LENGTH^3
GAL	GALLON (U.S.)	LENGTH^3
E9 L	1,000,000,000 LITRES	LENGTH^3
IMPGAL	GALLON (IMPERIAL)	LENGTH^3
KL	KILOLITRES	LENGTH^3
L	LITRES	LENGTH^3
M3	CUBIC METRES	LENGTH^3
M3(S)	STANDARD CUBIC METRES	LENGTH^3
M3(SD)	DRY STANDARD CUBIC METRES	LENGTH^3
E6 L	1,000,000 LITRES	LENGTH^3
BBL-YR	BARREL YEARS	LENGTH^3*TIME
CC/M3	CUBIC CENTMETRES PER CUBIC METRE	LENGTH^3/LENGTH^3
PPMV	PARTS PER MILLION BY VOLUME	LENGTH^3/LENGTH^3
VOL%	VOLUME PERCENT	LENGTH^3/LENGTH^3

CODE [UNIT_CODE] [A20]	UNIT DESCRIPTION [UNIT_NAME] [A40]	UNIT TYPE [UNIT_TYPE] [A20]
VOL/VOL	VOLUME RATIO	LENGTH^3/LENGTH^3
CFM	CUBIC FEET PER MINUTE	LENGTH^3/TIME
L/S	LITRES PER SECOND	LENGTH^3/TIME
M3(S)/MIN	STANDARD CUBIC METRES PER MINUTE	LENGTH^3/TIME
M3/DAY	CUBIC METRES PER DAY	LENGTH^3/TIME
M3/HR	CUBIC METRES PER HOUR	LENGTH^3/TIME
M3/MIN	CUBIC METRES PER MINUTE	LENGTH^3/TIME
M3/S	CUBIC METRES PER SECOND	LENGTH^3/TIME
E2 TONNE	100 TONNES	MASS
E3 TON	1,000 TONS	MASS
E3 TONNE	1,000 TONNES	MASS
E6 TONNE	1,000,000 TONNES	MASS
G	GRAMS	MASS
KG	KILOGRAMS	MASS
KTONNE	KILOTONNES	MASS
LB	POUND	MASS
MILLGRAM	MILLIGRAMS	MASS
OZ	OUNCE	MASS
TON	TONS (2000 U.S. LBS)	MASS
TONNE	TONNES	MASS
UG	MICROGRAMS	MASS
KG/AMP	KILOGRAMS PER AMPRE	MASS/CHARGE/TIME
G/AMP/H	GRAMS PER AMPRE PER HOUR	MASS/CHARGE/TIME^2
G/OUTBOARD	GRAMS PER OUTBOARD	MASS/COUNT
G/UNIT	GRAMS PER UNIT	MASS/COUNT
KG/APPLIANCE	KILOGRAMS PER APPLIANCE	MASS/COUNT
KG/BALE OF COTTON	KILOGRAMS PER BALE OF COTTON	MASS/COUNT
KG/BASEUNIT	KILOGRAMS PER BASEUNIT	MASS/COUNT
KG/BLAST	KILOGRAMS PER BLAST	MASS/COUNT
KG/COATING LINE	KILOGRAMS PER COATING LINE	MASS/COUNT
KG/DEGREASING UNIT	KILOGRAMS PER DEGREASING UNIT	MASS/COUNT
KG/DRUM	KILOGRAMS PER DRUM	MASS/COUNT
KG/E3 BATTERIES	KILOGRAMS PER 1,000 BATTERIES	MASS/COUNT
KG/E3 TANK CARS	KILOGRAMS PER 1,000 TANK CARS	MASS/COUNT
KG/E3 TIRES	KILOGRAMS PER 1,000 TIRES	MASS/COUNT
KG/E3 UNITS	KILOGRAMS PER 1,000 UNITS	MASS/COUNT
KG/E6 CIGARETTES	KILOGRAMS PER 1,000,000 CIGARETTES	MASS/COUNT
KG/HEAD OF CATTLE	KILOGRAMS PER HEAD OF CATTLE	MASS/COUNT
KG/HOLE	KILOGRAMS PER HOLE	MASS/COUNT
KG/MOVEMENT	KILOGRAMS PER MOVEMENT	MASS/COUNT
KG/OUTBOARD	KILOGRAMS PER OUTBOARD	MASS/COUNT
KG/PERSON	KILOGRAMS PER PERSON	MASS/COUNT
KG/PRINTING LINE	KILOGRAMS PER PRINTING LINE	MASS/COUNT
KG/PROCESS UNIT	KILOGRAMS PER PROCESS UNIT	MASS/COUNT
KG/SLIP	KILOGRAMS PER SLIP	MASS/COUNT
KG/SOLVENT CLEANER	KILOGRAMS PER SOLVENT CLEANER	MASS/COUNT
KG/TANK CAR	KILOGRAMS PER TANK CAR	MASS/COUNT

CODE [UNIT_CODE] [A20]	UNIT DESCRIPTION [UNIT_NAME] [A40]	UNIT TYPE [UNIT_TYPE] [A20]
KG/TANK TRUCK	KILOGRAMS PER TANK TRUCK	MASS/COUNT
KG/UNIT	KILOGRAMS PER UNIT	MASS/COUNT
KG/VEHICLE	KILOGRAMS PER VEHICLE	MASS/COUNT
KG/WELL	KILOGRAMS PER WELL	MASS/COUNT
MILLIGRAM/E3 BATTERIES	MILLIGRAMS PER 1,000 BATTERIES	MASS/COUNT
MILLIGRAM/LTO	MILLIGRAMS PER LANDING-TAKEOFF-CYCLE	MASS/COUNT
MILLIGRAM/PERSON	MILLIGRAMS PER PERSON	MASS/COUNT
MILLIGRAM/UNIT	MILLIGRAMS PER UNIT	MASS/COUNT
TONNE/CUVÉEE	TONNES PER CUVÉEE	MASS/COUNT
TONNE/FIRE	TONNES PER FIRE	MASS/COUNT
TONNE/PERSON	TONNES PER PERSON	MASS/COUNT
TONNE/PROCESS UNIT	TONNES PER PROCESS UNIT	MASS/COUNT
TONNE/UNIT	TONNES PER UNIT	MASS/COUNT
KG/CONNECTION/8760 H	KILOGRAMS PER CONNECTION/8760 H	MASS/COUNT/TIME
KG/DRAIN/8760 H	KILOGRAMS PER DRAIN/8760 H	MASS/COUNT/TIME
KG/FLANGE/8760 H	KILOGRAMS PER FLANGE/8760 H	MASS/COUNT/TIME
KG/SEAL/8760 H	KILOGRAMS PER SEAL/8760 H	MASS/COUNT/TIME
KG/VALVE/8760 H	KILOGRAMS PER VALVE/8760 H	MASS/COUNT/TIME
KG/$1000	KILOGRAMS PER THOUSAND DOLLARS	MASS/CURRENCY
G/J	GRAMS PER JOULE	MASS/ENERGY
KG/BRAKE GWH	KILOGRAM/BRAKE GIGAWATT HOUR	MASS/ENERGY
KG/E9 J	KILOGRAMS PER 1,000,000,000 JOULE	MASS/ENERGY
KG/J	KILOGRAMS PER JOULE	MASS/ENERGY
KG/MWH	KILOGRAMS PER MEGAWATT HOUR	MASS/ENERGY
MILLGRAM/MJ	MILLIGRAMS PER MEGAJOULE	MASS/ENERGY
MILLIGRAM/MWH	MILLIGRAMS PER MEGAWATT HOUR	MASS/ENERGY
G/M	GRAMS PER METRE	MASS/LENGTH
G/MILE	GRAMS PER MILE	MASS/LENGTH
KG/E9 M	KILOGRAMS PER 1,000,000,000 METRE	MASS/LENGTH
KG/M	KILOGRAMS PER METRE	MASS/LENGTH
KG/E6 M	KILOGRAMS PER 1,000,000 METRE	MASS/LENGTH
KG/VKMT	KILOGRAMS PER KILOMETRE TRAVELLED	MASS/LENGTH
MILLIGRAM/VKMT	MILLIGRAMS PER KILOMETRE TRAVELLED	MASS/LENGTH
TONNE/E6 VKMT	TONNES PER 1,000,000 KILOMETRE TRAVELLED	MASS/LENGTH
UG/KM	MICROGRAMS PER KILOMETRE	MASS/LENGTH
KG/ACRE	KILOGRAMS PER ACRE	MASS/LENGTH^2
KG/E3 M2	KILOGRAMS PER 1,000 SQAURE METRE	MASS/LENGTH^2
KG/E4 M2	KILOGRAMS PER 10,000 SQAURE METRE	MASS/LENGTH^2
KG/HECTR	KILOGRAMS PER HECTARE	MASS/LENGTH^2
KG/M2	KILOGRAMS PER SQAURE METRE	MASS/LENGTH^2
TONNE/ACRE	TONNES PER ACRE	MASS/LENGTH^2
KG/M2/HR	KG/M2/H	MASS/LENGTH^2/TIME
G/CC	GRAMS PER CUBIC CENTIMETRE	MASS/LENGTH^3
G/KL	GRAMS PER KILOLITRE	MASS/LENGTH^3
GRAM/M3	GRAMS PER CUBIC METRE	MASS/LENGTH^3
KG/E3 M3	KILOGRAMS PER 1,000 CUBIC METRE	MASS/LENGTH^3
KG/E6 M3	KILOGRAMS PER 1,000,000 CUBIC METRE	MASS/LENGTH^3

CODE [UNIT_CODE] [A20]	UNIT DESCRIPTION [UNIT_NAME] [A40]	UNIT TYPE [UNIT_TYPE] [A20]
KG/E9 L	KILOGRAMS PER 1,000,000,000 LITRE	MASS/LENGTH^3
KG/KL	KILOGRAMS PER KILOLITRE	MASS/LENGTH^3
KG/L	KILOGRAMS PER LITRE	MASS/LENGTH^3
KG/M3	KILOGRAMS PER CUBIC METRE	MASS/LENGTH^3
KG/E6 L	KILOGRAMS PER 1,000,000 LITRE	MASS/LENGTH^3
MILLIGRAM/KL	MILLIGRAMS PER KILOLITRE	MASS/LENGTH^3
MILLIGRAM/M3	MILLIGRAMS PER CUBIC METRE	MASS/LENGTH^3
KG/M3/MIN	KILOGRAMS PER CUBIC METRES PER MINUTE	MASS/LENGTH^3/TIME
G/TONNE	GRAMS PER TONNE	MASS/MASS
KG/KG	KILOGRAMS PER KILOGRAM	MASS/MASS
KG/KTONNE	KILOGRAMS PER KILOTONNE	MASS/MASS
KG/E6 T	KILOGRAMS PER 1,000,000 TONNES	MASS/MASS
KG/TONNE	KILOGRAMS PER TONNE	MASS/MASS
MILLIGRAM/KG	MILLIGRAMS PER KILOGRAM	MASS/MASS
MILLIGRAM/TONNE	MILLIGRAMS PER TONNE	MASS/MASS
PPMWT	PARTS PER MILLION BY WEIGHT	MASS/MASS
WT%	WEIGHT PERCENT	MASS/MASS
WT/WT	WEIGTH RATIO	MASS/MASS
G/S	GRAMS PER SECOND	MASS/TIME
KG/HR	KILOGRAMS PER HOUR	MASS/TIME
T/DAY	TONNES PER DAY	MASS/TIME
DAY	DAY	TIME
HR	HOUR	TIME
MIN	MINUTE	TIME
S	SECONDS	TIME
YR	YEAR	TIME